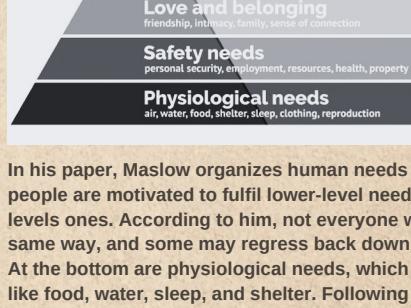


1943: A Year of Prosperity

Psychology

Maslow's Hierarchy of Needs

Brooklyn College professor and psychologist Abraham Harold Maslow presents his theory of the hierarchy of needs in his ground-breaking paper titled, "A Theory of Human Motivation." During his time at Columbia University, Maslow previously worked with Alfred Adler, an early colleague of the renowned Sigmund Freud. While many major theorists in the fields of psychoanalysis and behaviourism tend to focus on problematic behaviours, Maslow is more interested in analyzing what makes people happy and fulfilled, and what motivates them to achieve those goals. He believes that all humans have an innate desire to be self-actualized, or in simple terms, to be all that they can be.



A representation of the hierarchy that Maslow proposes in his work.

In his paper, Maslow organizes human needs into a pyramid, suggesting that people are motivated to fulfil lower-level needs before progressing onto higher levels ones. According to him, not everyone will move through these levels the same way, and some may regress back down if the higher needs are not met. At the bottom are physiological needs, which are our basic needs for survival like food, water, sleep, and shelter. Following that are safety needs, which address physical, financial, and health security and stability. The third level is love and belongingness, which addresses humans' desire for social connection, love, and belonging through relationships with friends, family, and partners. After that comes esteem needs, where individuals strive for self-esteem, recognition, accomplishments, and respect. Lastly, the highest level is self-actualization, where one is able to recognize their potential, self-fulfillment, and personal growth through a pursuit of creativity and problem solving to gain a better understanding of themselves. While this is meant to be hierarchical, Maslow reiterates in his paper that these needs are often fluid, and many needs are present simultaneously in an individual. This groundbreaking work has gotten many theorists discussing about human needs and might lead to a change in how we approach the current issues and questions in psychology.

Leo Kanner: Autistic Children

Austrian-American psychologist, Leo Kanner, publishes what is seen as the first systematic description of "autistic" children. His work as a child psychiatrist and observations made of children with unusual social behaviors and communication difficulties motivated his work. In his paper, he describes a group of 11 children, so all show similar patterns of behavior to each other, including language delays, repetition of behavior, routine preferences, and social withdrawal. Kanner uses the word "autistic" to describe these characteristics displayed and puts an emphasis on the idea that it is a neurological disorder present from early childhood, as well as that it is different than other developmental disorders observed in children.

World War II

Victory at Stalingrad

After almost seven long months of intense battle, the Battle of Stalingrad came to an end with a victory for the Allied forces against the Axis forces. This major battle of the ongoing World War has been raging on at the Eastern Front, with Germany and its allies attempting to seize the city of Stalingrad in the Soviet Union. The battle to date has been one of the bloodiest and fiercest, with both sides enduring massive amounts of casualties. Stalingrad was of great strategic importance for both the Allied forces and the Axis forces because it was a large industrial city on the banks of the Volga River. The city produced armaments, tractors, and whoever controlled the city would gain access to oil fields of the Caucasus, and thus control of the entire Volga River. The German forces were dealing with a lack of resources, especially fuel, hence why the invasion of Stalingrad was of major importance for them. Defending Stalingrad became of utmost importance for the Soviet Union and Joseph Stalin, who shared his last name with the town.

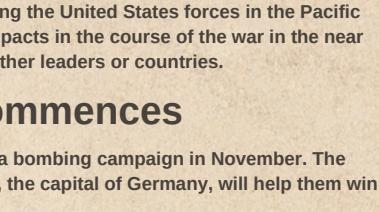


The fierce Battle of Stalingrad comes to a close.

The initial attack, which took place in July of last year favoured Germany and its allies as they pushed hard into the city and the Soviet Union. Even with significant casualties on their front, by mid-November of 1942, they had pushed the Soviet Union forces into narrow zones along the riverbank. Stalin's forces fought back furiously in a strategic battle leading to the surrender of the German forces on February 2, 1943. The Axis forces had been exhausted of their food and ammunition. This was a major victory for Stalin and the Allied forces, and all are hopeful this helps lead us to the end of this treacherous war.

A Conference in Tehran

Allied leaders Franklin D. Roosevelt, Winston Churchill, and Joseph Stalin recently met in Tehran, Iran, to coordinate military strategy and discuss plans for the post-war world. This meeting took place between November 28 and December 1 of this year. One of the most important topics discussed was the next phase of the war against the Axis forces in both Europe and Asia. Sources say that a plan called "Operation Overlord" was the biggest topic of discussion between the three major world powers.



The three leaders seated next to each other.

This operation has been said to involve an invasion of northern France, opening up a second front away from the Eastern front that the Soviet Union was already combatting. These discussions were also rumored to have involved conversations about the future of Germany and Eastern Europe once the war concludes, which is hopefully soon. Some of the biggest news, however, is that the Soviet Union has agreed to declare war against Japan, joining the United States forces in the Pacific War. This development can have major impacts in the course of the war in the near future, but it has yet to be confirmed by either leaders or countries.

A Battle in Berlin Commences

A battle in Berlin begins, starting off with a bombing campaign in November. The Allied forces believe that capturing Berlin, the capital of Germany, will help them win the war.

Other News

Zoot Suit Riots

While World War II was raging across the world in Europe, there was still conflict occurring more locally in the United States of America (USA). From June 3-8, the Zoot Suit Riots rocked Los Angeles, California. The riots started when a group of 11

American sailors encountered a group of young Mexican-American men, and got into an altercation after an argument. The following day, 200 sailors headed towards the main Mexican-American settlements in the city assaulting and abusing anyone in a zoot suit.

Over the next few days, thousands of servicemen and residents of Los Angeles joined the search and attacks on any young Mexican-American males they encountered. No soldiers or residents were arrested over the period of these riots, rather Mexican-American youth were arrested after they were attacked. The riots were brought to a halt on June 8 when the Navy and Marine corps intervened and made Los Angeles off limits to all military personnel, but the damage had been done. Racial tensions continue to remain high in the city of Los Angeles and even across the rest of the USA.

Clark L. Hull: Principles of Behavior

One of the most impactful works published this year originates from the Institute of Psychology at Yale University. Esteemed American psychologist Clark L. Hull published his book, *Principles of Behavior*, where he attempted to produce a unified theory of behavior. Hull has been a professor at Yale since 1929 and has worked on research related to experimental psychology and behaviour theory, including his popular book, *Aptitude Testing*, which was released in 1928. He was also the president of the American Psychology Association from 1935 to 1936.

In the work, Hull outlines his "Hypothesis of Behavior" where he used mathematical principles and equations to explain and predict human and animal behavior. Hull proposes that the result of interactions between factors can be used to understand behavior, such as through biological needs like hunger or thirst, environmental stimuli, and how that individual learned in the past. Reinforcement, also labelled as drive reduction, is what is believed to be integral, as actions that reduce biological needs are reinforced to occur more in the future. Hull also mentions his formal mathematical model of behavior, which helps quantify some of these relationships. The basic form is $V = D \times M \times S$, where V represents the habit strength, D represents the drive level or physiological need state of the organism, M represents the previous level of habit strength, S represents the incentive value of the stimulus or environmental cue present in the situation. Hull's book has gained major traction in the psychology community by cementing theories of animal-based learning and conditioning and many predict that it may go on to be one of the most influential works of this decade.

$$V = D \times M \times S$$

The basic form of Hull's proposed equation for the model of behavior.

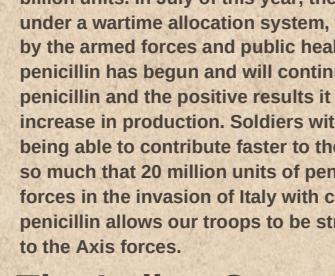
McCulloch-Pitts Model

News from the University of Illinois at Chicago indicates a possible breakthrough in our understanding neural networks. Warren McCulloch, a self-taught logician, and Walter Pitts, a cognitive psychologist, propose a mathematical model of a neural network in their paper titled, "A Logical Calculus of the Ideas Imminent in Nervous Activity." The McCulloch-Pitts Model, also known as the McCulloch-Pitts neuron, describes a simple mathematical model of how individual neurons in the brain might work. The work of these men builds upon the models and theories shared by English mathematician Alan Turing in his work titled, "On Computable Numbers."

Pitts and McCulloch see neurons as binary threshold units which are able to take input signals, process these signals, and then produce an output. By binary units, it means that only two states exist for neurons: activated, in which they are firing, or not activated, in which they are not firing. They suggest that each neuron has a threshold value, and if the sum of the input goes beyond this threshold, the neuron fires. This then means that neurons in the brain only fire when a certain level of input is met. As for the mathematical aspect, their neuron is described using a threshold function, where inputs are weighted, summed, and then compared to the threshold. The important of this model is that networks of interconnected threshold units could conduct complex computations. This paper has been the talk of the town in both neuroscience and mathematical communities, and the hope is that it continues to guide research into neural networks.

A Boom in Penicillin

To say that the production of penicillin has increased would be an understatement. Penicillin production has skyrocketed. Penicillin, discovered by Alexander Fleming in 1928, is a medication that has been seen to be useful in managing and treatment a wide range of infections. At a time of war, penicillin can be a game-changer in determining which side has more available forces and the upper edge. This discovery has helped the world make major leaps in the medical field, but also now in other aspects.



Rampant production of penicillin was crucial in reducing casualties for Allied forces.

In 1941, the United States of America (USA) did not have enough penicillin to even treat one patient. The following year, they had enough to treat less than fewer than 100 patients. In the United Kingdom, they have been attempting to produce penicillin but frequent bombing by Germany has made it difficult to main production. In the first half of this year, the USA produced 800 million Oxford units of penicillin, while in the second half the country produced 20 billion units. In July of this year, the War Production Board placed penicillin under a wartime allocation system, with all supplied being designated for use by the armed forces and public health service. The mass production of the penicillin has begun and will continue throughout the war. Field trials of penicillin and the positive results it had on the wounded helped fuel this increase in production. Soldiers with new and old wounds were healing and being able to contribute faster to the war effort. The supply situation improved so much that 20 million units of penicillin per day were available to the Allied forces in the invasion of Italy with commenced this September. The hope is penicillin allows our troops to be stronger and push forward in bringing an end to the Axis forces.

The Italian Campaign

The Allied forces operation in Italy has begun. Based on various strategic ideologies and the desire to eliminate Italy from the war, Winston Churchill and Franklin D. Roosevelt agreed to the Italian Campaign. The campaign began in July of this year, with the Allied invasion of Sicily, which is at the southern tip of Italy. Later in July, the fascist dictator Benito Mussolini was voted out of power by his own Grand Council and placed under arrest. It is said that Mussolini told King Vittorio Emanuele that the war was lost, and the King was not pleased.

The Allied forces, after securing Sicily, continued onwards to the Italian mainland which occurred at the start of September. The Italian government, however, had agreed to an armistice with the Allies, or in other words a truce. The German forces were prepared and planned on fighting the Allied forces themselves. Pushing through, the Allies continued to push towards mainland Italy, at times through difficult terrain. In October, the Axis forces set up a defensive line across Italy, just south of Rome, which was known as the Winter Line. The most recent news from the battlefield tells us that the Allied forces are working towards pushing through this Winter Line but are having a difficult time and it has halted their advance on the western side of Italy. There have been significant casualties on both sides so far in the Italian campaign, but the Allied forces are holding strong and will hopefully continue their push into Italy.

The Stanine Test

J.P. Guilford has done his part to help the war effort this year. In his role as the Chief of the Psychological Research Unit at the U.S. Army Air Forces Training Command Headquarters in Fort Worth, Texas, he led the Stanine Project. The goal of this project was to identify nine specific intellectual abilities which are crucial to flying a plane. Stanine, meaning Standard Nine, was a term that was coined during the project. Guilford has used these factors to develop the two-day Classification Test Battery for aircrew trainees. This test has played a significant role in increasing the graduation rates for aircrew trainees.

Construction Complete for Pentagon

After 3 years of construction, the Pentagon Building in Arlington, Virginia, USA was complete. At a cost of \$83 million, it becomes the world's largest office building.

Oklahoma! Debuts on Broadway

A new musical "Oklahoma!" opened on Broadway for the first time on March 31, 1943. The collaboration between Richard Rodgers and Oscar Hammerstein II has been gaining a lot popularity since its release earlier in the year.

Famine in Bengal

Several million people have died due to famine in the Bengal region of India. In the midst of World War II, the people of the region suffered through one of the worst disasters so far in twentieth century South Asia.