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## Section 1. Geology

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### HOW YUNNAN SUSTAINED ITS POSITION AS THE WORLD'S DOMINANT TEA PRODUCING REGION: AN ENVIRONMENTAL AND SOCIO-HISTORICAL ANALYSIS

**Abstract.** Tea has been the most prevalent drink in most parts of the world since the 16<sup>th</sup> century. However, it had emerged in China some 2000 years earlier. Yunnan has been the production site of tea since the beginning of this development and, due natural geological advantages, through the expansion of trade in the centuries since, Yunnan has sustained its status as the most important tea-producing region in the world. Geologically, the temperature, water conditions, soil conditions, and natural surrounding plantations all benefitted the cultivation of tea and made Yunnan's tea world-renowned for its superior quality. In addition to these geological advantages, Yunnan benefitted from its geographic position as the starting point of several ancient trade routes, allowing the region to expand its tea trade. In conclusion, because Yunnan held the advantage in these two critical spheres – cultivation and trade – it became the most important tea producing region in China during the Tang dynasty and is also one of the most globally significant in contemporary society.

**Keywords:** Yunnan, Tea, Geology, History, Trade, Culture.

#### **Criteria for Evaluating the Quality of Tea**

Tea is one of the world's most common drinks – especially in China. The earliest exploitation of the tea tree took place in the mountains in the Xishuangbanna, an area located in southwestern China. Tea was originally exploited for its pharmacological properties, believed to be a magical medicine of sorts and said to have healed Emperor Shen Nung of the Xia dynasty, renowned for his contributions to ancient Chinese herbology. Over the course of the next five thousand years, tea would reach all corners of the world, becoming one of the most important

commodities purchased by the British empire during the period of European colonization, central to both

#### **Criteria for Evaluating the Quality of Tea**

In order to understand how Yunnan came to be such important site of tea production, we must first understand how the quality of tea is evaluated and why such criteria matter for global tea drinkers. As tea became a universally popular drink by the sixteenth century, consumers became increasingly picky with regard to the quality of tea. The characteristics now employed to assess tea quality vary according to preferences in taste and fragrance unique to each country.

However, the criteria by which tea is evaluated by certain professional organizations worldwide continues to follow the criteria employed in China, due to the fact that tea was first cultivated there.

According to standards followed by tea experts from the Chinese Pu-er Tea Association, the evaluation of tea is according to several criteria which occur during the times before tea is dried, when tea is dry, and when it is brewed. The cleanliness, color, fragrance, and taste of the tea, as well as the shape of tea leaves are all considered when evaluating tea from various producers. The purity of tea refers to the index of pesticides and heavy metals found in the dried tea leaves. The most favorable condition for tea is that its leaves be identical and vivid in color. These characteristics are indicative of the age and processing of the tea. The completeness and shape of dry leaves are also assessed. The brewed tea must also be pure and bright. A muddy, dull-colored tea results from low quality leaves. In addition to these indicators of purity, quality tea should taste mellow. A brut or diluted flavor indicates the presence of undesirable substances or a deficiency of organic matter in the leaves. According to research conducted by Guangdong Agricultural Science Institution, substances that influence the taste and quality of tea include tea polyphenol (TP), amino acid, caffeine, and soluble sugar (Liu et al. [5, 162]). Together, the TP and amino acid determine the tea's astringency. Excessive TP produces a bitter taste, but in harmonious ratio, TP and amino acid combine to neutralize both bitterness and sweetness. Caffeine, too, adds bitterness while the soluble sugar adds sweetness to the taste of tea. Combined, these criteria form the foundation on which tea can be assessed for its quality and by these measures, tea from Yunnan is unequivocally the world's best, meeting the highest standards in every category. In the discussion that follows, Yunnan's climate and unique environment are discussed to demonstrate how the natural environment provides the ideal conditions to produce such high-quality tea, rendering the region as a natural center of production.

#### **Climatic and Environmental Factors of Yunnan**

Since the discovery of the first tea tree in the Yunnan province, the region has been one of the largest centers of tea production in the world, arguably due to its unique climatic factors. Tea trees originated in the town of Xiang Zhuqing, in southwestern China, where rainforests are prevalent (Li [10, 115]). Highly tolerant of shade, the tea trees' process of photosynthesis for tea depends on a particular quality and intensity of sunlight. The tea gardens high up in the mountains in Yunnan produce luxuriant trees yet the environment is foggy throughout the year, with minimal sunshine. The trees receive sunlight only for short periods, while the foggy environment increases both the diffusion of the light and scattered radiation. With the abundant foliage further reducing the sunshine that penetrates through the Yunnan tea gardens, this aspect of the local environment, surprisingly, produces ideal light conditions, favoring tea trees, and resulting in the enhancement in tea quality. The minimal diffuse light has proved beneficial in balancing the chlorophyll and amino acid content of the leaves, with chlorophyll determining their color and the amino acid contributing to their flavor, giving it a fresher taste and a better scent. Note that the specific amino acid that is found in tea is called the L-theanine, which works in the brain, helping to regulate both physical and psychological reactions. L-theanine produces a feeling of relaxation and may partly account for the early exploitation of tea for medicinal purposes (Juneja et al. [1, 199]).

The temperature in Yunnan province also works to improve the properties of tea. Research indicates that temperature both decides the enzyme activities of tea trees and affects their metabolism (Li [10, 115]). On average, for every 100 meters in elevation, the temperature decreases half a degree Celsius (Luo [8]). This decrease in temperature aids in increasing the content of L-theanine. According to lab results from Chinese Academy of Agricultural Science, the amount of combined L-theanine and nitrogen paired with the height at which the tea gardens are located form an inverse ratio, such that

when tea gardens are at higher elevation, the contents of those substances increase, which leads to the enhancement in the fresh taste of tea (Li [10, 115]). Moreover, the daily temperature in Yunnan's mountainous region is beneficial for the accumulation of organic matter in tea leaves because it slows the growth of trees. Hardly any photosynthesis that can occur at low temperatures, and as noted previously, lower rates of photosynthesis further increase the amino acid content of the leaves (Yang et al. [7, 3]). By thus benefitting the accumulation of organic matter within leaves during the growing process, the low air temperature in the Yunnan region contributes to the fresh taste and aroma of the tea produced there.

In addition to light and temperature, the water conditions of the region are ideal as they, too, increase the organic matter in the tea tree. Water is a crucial component in determining the metabolism of tea trees (Luo [8]). The Yunnan tea gardens generally scatter in the mountain areas below 800 meters of elevation. Within this height range, the rate of precipitation increases as elevation increases. When the bountiful rainfall is paired with the thick plantation coverage, the conditions of the high mountain tea gardens are ideal for maintaining the humidity of the garden, further contributing to the production of amino acid and proteins in tea leaves. Plentiful rainfall also boosts the nitrogenous metabolism of the tea leaves, increasing the total nitrogen content (Li [10, 115]). Unlike tea gardens located in areas with lower humidity, the rate of cellular respiration under humid conditions is low and thus reduces the consumption of organic matter in tea leaves. The ideal water conditions created by the high elevation of Yunnan's mountain tea gardens naturally contributes to sustaining Yunnan as the largest production place of tea in the world.

While the advantageous water conditions in the region contribute to the organic substances' content in tea leaves, soil in Yunnan also ensures the quality of tea by providing enough organic elements for the growth of the tea trees. When we compare the soil of the Yunnan tea garden with soil from other regions,

it becomes apparent that the soil from Yunnan has more chad in it. Chad loosens the structure of the soil, bringing more air into it and allowing the roots of the tea trees to extend (Li [10, 116]). This is critical, since the expansion of roots for plantations allow it to extract richer nutrients from the soil, which in turn contributes to the growth of the tree. Moreover, the soil from Yunnan benefits from the decomposing leaves from the surrounding environment. Decomposed plants enrich the soils with a variety of organic matter and mineral nutrients, and these nutrients cover almost all that the tea trees require, increasing the nutrient content of the leaves and, in turn, further enhancing the quality of tea produced from the region. The soil also contains nutrients from the excreta of forest birds. All this decomposed matter brings extra nourishment to the soil that, keeping the trees healthy and allowing the soil to exchange oxygen with the air, thus producing the tea trees with adequate air to assimilate the nutrients (Li [10, 116]).

The natural floral surrounding the tea gardens also contribute to the conditions needed for the growth of tea given that erosion processes add more nutrients to the soil. This occurs by the surrounding trees balancing the humidity of air and increasing the fertility of soil by adding more organic matter. Plantations also adjusted the intensity and capacity of light going into the tea garden, which, it should be recalled, plays an important role in the photosynthesis process that affects the quality of tea (Li [10, 116]). While filtering light and protecting tea trees from the intense wind in mountains that could possibly damage the sprouts and crotches of tea trees, the plantations surrounding the high mountain tea gardens demonstrate that ambient plantations play a critical role by enhancing the quality of the trees.

While there are several tea gardens located further down the Changjiang delta region, those tea gardens are not equipped with the best environmental conditions to construct an ideal tea profile. The rainy season results in excessive precipitation during June and July and is, in certain years, unexpectedly

intense. This can lead to loss and negatively impact tea quality, and thus decrease the reliability of tea production from this region. Temperature can rise above 35 degrees Celsius, resulting in humidity that can soften the leaves. Even though the transfer of the country's capital to the region during the Song dynasty resulted in an economic boom and increased tea consumption in the south (Wang [4, 476]), tea gardens in this region were still not considered the best source due to the uncertainty of climate.

From a geological perspective, we can therefore conclude that various natural factors combine to create the favorable environmental conditions of the mountain regions in Yunnan. The result is that the unique environment is the most suitable place regionally for the production of tea, which is argued here to have played a major role in fostering Yunnans economic prosperity and renowned status in the tea trade. While naturally-occurring, environmental conditions have propelled the growth of tea in this region, several social factors have also contributed to the statue of Yunnan's tea gardens.

### **Yunnan and the Social History of Tea**

According to the "Tea Bible" of Yu Lu which was written in the Han Dynasty that is often referenced by scholars when talking about tea, tea in the Yunnan region was exploited by Shun Nung during the Neolithic period. The first few pieces of written evidence appearing during the Zhou dynasty, about a thousand years after the Shun Nung and Xia dynasty, declare that Shun Nung taught civilians to plant crops and personally tasted over one thousand kinds of herbs to study their medicinal properties (You [7, 110]). During the earliest years of the exploitations, Shun Nung described tea leaves as an herb with refreshing effects that could be accessed by chewing the leaves, rendering people refreshed and sober. In the last millennium of Chinese history, tea was transformed first into a food and then later into a drink.

During the Neolithic period, tea was praised as a kind of elixir that saved the supreme dominator of the Xia dynasty (about 2000 BCE), Shun Nung, from

death. Legend tells that in an effort to heal his people, Shun Nung experimented with a variety of grasses, personally tasting each of them and recording their effectiveness as medicine. Upon inadvertently eating some poisonous grass, the Emperor fell gravely ill, only to recover after chewing tea plants from Yunnan (You [9, 110]). While it is hard to validate this cultural memory, by the end of the Qin dynasty (221 BCE~207 BCE), tea appears to have transitioned from leaves chewed for medicinal purposes to a food brewed to make porridge. With time, understanding of this plant deepened; a fresco from the Pre-Han dynasty, depicting tombstones, indicates that by this period the Chinese had developed a means of preserving tea in the form of tea-bricks, brick-shaped blocks composed of dried tea leaves (Ni [2, 320]). It was also in this period that people began to drink their tea brewed, a transformation which continued gradually into the Han and Tang dynasty.

The transformation of tea from medicine to beverage spread from Yunnan across the country during the later Qing and Hang dynasty, due to China's increasing social stability. During the Han dynasty (206 BCE~220), beginning just two decades after the fall of Qing dynasty, tea drinking became a prevailing custom. It was during this period that tea ceased to be a novelty, its consumption spreading to the rural peasantry. Written records from the Han dynasty record detailed daily tea drinking culture in Sichuan and near the Yunnan region, proving yet again that it was the people from these regions who first explored and refined the use of tea and that tea was already prevalent throughout that region some 2000 years ago (Ni [2, 1]).

Once the population had developed a physical craving for tea, by the time of the Tang dynasty (618–907 CE), tea tasting had turned into a spiritual need. Tang people treated tea as a social art, and tea drinking became prominent throughout all parts of the country during this time. The Tang dynasty was also a time of tranquility without the disturbance of warfare against the Northern nomadic tribes. This

social stability allowed the country to develop in the cultural and economic spheres. Emperor Li loosened restrictions on exotic trade, offering merchants greater opportunities to export goods than at any previous period in history. This led to the increasing prosperity of the Tea Horse Road, a trade route that established during the Han dynasty which started out from Yunnan, entered the Gangetic plains, and eventually ended in West Asia and the coast of the Red Sea. Due to the interference of nomadic tribes along the road, trade on the route did not boom until their expulsion of at the close of the Han dynasty. By the beginning of the Tang dynasty, Yunnan traders dominated access and, as the only tea-producing region in the country, had no competitors along the journey. Whereas the Sui and Han dynasties had imposed restrictions on trade, the free-trade policies of the Tang dynasty led the Tea Horse Road to emerge as major economic highway leading to the spread of Yunnan tea into new regions (Sheng [3, 30]). The rapid development and trade on the Tea Horse road pushed Yunnan to the summit of the tea trade.

The emergence of the Silk Road during Tang dynasty led to yet another boom in the Yunnan tea trade. The Silk Road, which entered China from the Gansu and Xinjiang areas, brought scholars and exotic traders into the country. As those foreign merchants and scholars encountered the astounding new drink, the tea trade boomed. Countries from across Asia now sought to import tea from China, and Yunnan, due to its geographic advantage, experienced huge rise in demand, becoming one of the most important tea exporters during the Tang dynasty.

One of the other factors that contributed to the popularity of tea was its portability. Unlike the silk and porcelain products traded on the Silk road, tea was not fragile and was easy to transport in the form of tea-bricks. Therefore, the Tea Horse Road has never been destroyed or disrupted, even during wartimes (Sheng [3, 32]). As Tea Horse road traders passed through Tibet and the Himalayan mountains, carrying tea with them, people there too began to consume this

new drink and to rely on it to stay warm and quench thirst (Sheng [3, 29]). Tea became essential to people along the route and demand increased, leading to the increasing prosperity of the Yunnan tea trade.

As the Tang dynasty dissolved into separate states, known in the period as the South and North dynasty (420~581 CE), the economic and political center of the country moved to the south. In order to stabilize people's lives and with the favorable rice growing climate condition in the south, the central government was moved from the Haihe region down to the Changjiang delta region. This shift shortened the distance between the capital and Yunnan, making transportation easier and more convenient, and thus further promoting the tea trade (Wang [4, 476]).

Tea culture in China reached a new peak during the Song dynasty (960~1127 CE) due to the intellectual and cultural achievements developing in civil society, resulting in the apex of Yunnan's tea economy. As the emperor Zhao of Song dynasty quelled nomadic disturbances and agriculture and trade rapidly developed civil society blossomed. Tea culture continued to prosper; according to an old Chinese saying, "when opening the door in the morning one is confronted with the task of providing the seven daily necessities: firewood, rice, oil, salt, sauce, vinegar and tea" (Li [5, 75]). Tea was by this time indispensable in daily Chinese life.

Marketplace culture developed during Song dynasty for the first time as the government promoted further free trade of products. In those rural markets, tea houses emerged, which were named as Tea Shops as places for people to sample tea and chat. Slowly, games named as "Tea Battles" developed in those shops and they developed into contentions between tea shops. While tea tasting was more of a basic form of battle, these competitions of tea brought excitement and satisfaction to the "tea addicts" at that time (Li [6, 77]). To create the best tea with long-lasting Tanghua – the foam on the surface of tea drinks – the requirements of the quality of tea leaves and the condition of water were very exacting. While tea was required to be clean,

fresh with fragrance, the competitors were also asked to manipulate decent skills in “Dian” and “Fu”, which were two skills to pour boiling water onto tea leaves and using a broom-like tool to perform Tanghua (Li [6, 76–77]). Even Huizong, the emperor of North Song, was addicted to this competition as it brings enormous gratification to tea drinkers who win the battle. As to maintain the fulfillment of winning, clean fresh tea leaves that could produce tea of high quality were largely demanded and people targeted tea from Yunnan as the best tea to win. The untraversed high mountain tea gardens gave cleanliness to tea leaves while the mineral and temperature conditions discussed in the previous paragraphs all contribute to the high quality. Even though there were newer tea gardens emerged in the Changjiang regions, tea from Yunnan still wins from almost all perspectives, therefore helped Yunnan to maintain its importance in tea production through the high demands from market and tea battles. This introduction of tea into rural life during Song dynasty and the emergence of tea battles led to an increase in demand of tea produced in Yunnan due to people’s pursuit for tea of highest quality.

Not only did the land-based trade routes developed during the Tang and Song dynasty bring larger markets to Yunnan, the development of maritime trade in the later Ming dynasty (1368~1644) also resulted in a boom to the tea economy. The bedrock of this new-found market was the invention of the magnetic compass during the Han dynasty, which, in combination with other advanced technologies emerging during the Tang and Song dynasty, brought the maritime trade to its apex during the Ming dynasty, when a Chinese general called Zhenghe was offered by the emperor Di Zhu a chance to “show off how great the Ming dynasty is” by trading with coastal countries. Zhenghe’s expedition brought tea, porcelain, and silk to Europe and, for the first time, to Great Britain. It is at about that time that the first official written records speak of this Chinese beverage having entered the British lives (Sheng

[3, 50–51]). Tea had earlier become popular in nearby countries like Portugal. In the late seventeenth century, Princess Catherine, wife of Charles II, brought along from Portugal with her the trend of drinking tea as she married to the English nobles. From that time, the English queens and princesses dedicated in promoting tea in their daily lives and the ritual of afternoon teatime prevailed among the nobles. Afternoon tea became as essential as other meals, creating a new form of social time among aristocrats. Great Britain became one of the world’s most significant markets for imported tea and has remained so. The British nobility sought tea of the highest quality, and for a time, green tea was favored (Sheng [3, 50–51]). Yunnan was well prepared to respond to this need, possessing the world’s most important green tea gardens, which produced tea of the highest quality. The requirements of the British nobles offered export opportunities for the Yunnan tea industry, solidifying Yunnan’s position as one of the largest tea producers in the world.

Even in contemporary society, tea from Yunnan still maintains its advantages as a result of its unique geographical location. The inconvenience of building highways into the hilly regions has to date prevented heavy industry and factories from entering the area and polluting its soil and water resources. The cleanliness and quality of the tea thus continues to be ensured. Continuing to benefit from its combined environmental advantages, as well as the influence of international trade, Yunnan has been able to sustain its absolute dominance in tea production. In light of the global status in producing tea, evaluated from both a geological and socio-historical perspective, Yunnan province has undeniably been the most crucial producer of tea and has maintained its importance by exercising its excellent geological identity while developing along with the current of history. It seems likely that Yunnan will continue to dominate the market, augmenting its advantages, and expanding its dominance further in the future.

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## Section 2. History and archaeology

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### THE SECOND RED SCARE: AN ERA OF UNJUSTIFIED FEAR

**Abstract.** This essay analyzes how the federal government, Senator Joseph McCarthy, and the Rosenberg case both shed light and distorted the threat of the communists to the American public. This work interprets how the Second Red Scare's public opinion was based on fallacious information.

**Keywords:** Second Red Scare, Cold War, Anti-Communist, McCarthyism.

#### I. Introduction

From the late 1940s to the 1950s, the Second Red Scare was a period during the Cold War in which anti-communist fear swept American society. In the wake of World War II, the Soviet Union's expansion of power and territory heightened fears that communists would overthrow various democratic and capitalist systems around the globe and infiltrate into the government and society. This anti-communist hysteria soon became synonymous with McCarthyism, the practice of making unfounded accusations against innocent people that originated from Senator Joseph McCarthy. This fear, however, was not a new phenomenon. Anti-communist reactions first entered the nation after World War I and the Bolshevik Revolution in a period called the First Red Scare. Like its predecessor, the second wave of anti-communist sentiment in the 40s and 50s, called the Second Red Scare, continued to damage the civil rights of individuals as it sought to identify suspected communists [30, 406].

In assessing the extent of the justified societal apprehension, one must understand how Americans viewed freedom during this time and what constituted un-American within the Cold War. Initially, Americans celebrated and fought hard to protect freedoms, like the civil rights within the Bill of Rights, as well as the condemnation of enslavement and amendments that followed the Civil War. However, when the USSR threatened the safety of America and its allies, the definition of freedom became more narrow and referred to the opportunity to resist communism, infiltration, and foreign nuclear power [30, 406–407]. Similarly, the labeling of certain people and behaviors as un-American led to the conflation of any groups outside of the democratic West into a single enemy. Nazis, for example, were conflated with communists, and both were viewed as totalitarians. Thus, during post World War II, when the Nazi's brutality was revealed, the communists were regarded as successors of the Nazis [30, 399].

The combination of the public's trust in the government and the mounting domestic and international crises – such as the development of the Soviet atomic bomb, the fall of China to communism, the invasion of South Korea by North Korea, the occupation of Eastern Europe by the Soviets, the Rosenbergs trials, etc. – allowed opportunists and politicians to capitalize on the nation's fears for political gains. **Although the federal government, Senator Joseph McCarthy, and the Rosenberg case exposed the threat of communists to the American public, the dangers posed by the communists were largely exaggerated. Thus, to a larger extent, the American public's general attitude toward the communists during the Second Red Scare was formed mainly through inaccurate and distorted information.**

## II. The Federal Government

All three branches of the central government helped to lay the foundation of the anti-communist hysteria by establishing agencies and committees. Furthermore, these branches facilitated these fears by supporting measures that were designed to combat against communist infiltrations. During the Second Red Scare, the legislative branch competed to reveal communists, the executive branch worked to remove disloyal employees, and the judicial branch was entangled in the difficult task of suspending constitutional rights in order to ensure the nation's security [6].

### A. The Legislative Branch

In 1938, created within the House of Representatives was most notably the House Un-American Activities Committee (HUAC). Although this committee played a significant role in exposing Alger Hiss, a former state department official, its indictments against Hollywood employees were largely fraudulent and overstated.

During the Second Red Scare, HUAC investigated and subpoenaed hundreds of suspected communist sympathizers within the film and movie industry. Many of them, such as actor Ronald Reagan, cooperated by naming people they believed to be communists. However, the Hollywood Ten, ten directors and screenwrit-

ers, fought back by citing their First Amendment right. This group of individuals questioned the agency's right to inquire about their political affiliations [29], which resulted in them being imprisoned and blacklisted from the industry [3]. The only option that would have removed them from the blacklist was to confess their guilt and incriminate others [3]. Many of the directors cited their Fifth Amendment right against self-incrimination, however despite this action, their behavior was widely perceived as an admission of guilt. Many believed the accused and the witnesses had obligations to answer the questions posed by the committee and identify the people who were sympathetic to communism [29]. With the pressure of facing prison sentences and other legal punishments, many gave false information and implicated their colleagues, friends, and family members in order to avoid punishment and defamation within society. For a number of conservative opportunists in the industry, they were able to exploit this tension and falsely name alleged radicals in order to evict them from Hollywood and gain more power and influence for themselves in the industry [3].



Figure 1. It's okay – We're hunting Communists

The complex effects of HUAC was captured by the 1947 cartoon by Herbert Block, who demonstrated the unscrupulous name-calling game of the committee in his work: “It’s okay – We’re hunting Communists” (View Figure 1) [4]. This cartoon depicts HUAC officials running over pedestrians and assuring them that everything was under control because they were pursuing communists. This work highlights the unjustified actions of HUAC tackling communism that caused alarm and terror within the society.

Although some of the blacklisted workers were never part of the Communist Party, there were indeed devoted communists in the industry. Despite the fears raised by HUAC and other government agencies, these communists did not pose a threat [14]. Within this period, the popular view incorrectly portrayed communists either as dangerous revolutionaries who aimed to overthrow the democracy of the United States or as agents who were manipulated by the Soviet Union and worked as spies [30, 407]. In reality, most Hollywood communists fit neither of these descriptions. Instead, they were anti-Nazists and anti-Fascists who advocated for a variety of domestic social reforms, including those that combated against labor, racial, and religious inequalities [29]. In the 1930s, many joined the Communist Party because they saw communism as a path for fighting against injustices both domestically and abroad. Supporters of the Communist Party viewed the democratic system of the Western world as being manipulated by capitalists who pursued their own imperialist interests at the expense of workers. In the United States, those in the Communist Party were not loyal to Moscow, but rather to the social movements in the 1930s. Like their Republican counterparts, they were patriotic, but they were devoted to a different, and more radical approach to combat these issues [30, 408–409]. Ben Barzman, a Hollywood screenwriter, remarked, “It’s [the Communist Party was] the best, most organized way I know to fight fascism and imperialist war and to aid the colonial peoples in their struggle for freedom” [14]. The al-

leged communists did not match the traditional descriptions portrayed by government officials, and were in reality a weak political group that only made up a small percentage in Hollywood [14] and the rest of the country [30, 393]. However, HUAC’s grouping of the anti-Nazists, anti-Fascists, communists, and other leftist and centrist groups into a collective whole clearly defined what was considered un-American and therefore subjected many communists and those suspected of being communist sympathizers to attacks. Therefore, HUAC helped perpetuate the incorrect perception that those who were associated with beliefs that were un-American were dangerous revolutionaries. The legislative branch was not the only branch that spread distorted information, the executive branch also played an important role.

### **B. The Executive Branch**

The Federal Loyalty Program might have exposed disloyal government workers, but it was the constant lowering threshold of what constituted disloyalty that led to a rise in the number of dismissals within the American government during the Second Red Scare.

In 1947 President Harry Truman issued Executive Order 9835, which created the Federal Employee Loyalty Program. Truman did not believe in the threat of government infiltration [3], but he established this program in response to the public’s anxiety towards the threat of communist infiltration within the government [29], the Republican’s attack on the president’s administration as being “soft on communism” [30], and the congressional investigations in the nation. Loyalty boards were established in every federal agency and department to investigate the loyalty of the workers [7]. Within this context, a federal employee could be dismissed “on all the evidence, reasonable grounds exists for belief that the person involved is disloyal to the Government of the United States” [9]. There were 6 categories of disloyalty, but the chief criterion [30, 420] for assessing the loyalty of the civil servants was the “[m]embership in, affiliation with or sympathetic asso-

ciation with any foreign or domestic organization ... designated by the Attorney General as totalitarian, fascist, communist, or subversive” [1]. This criterion was essentially founded on the principle of guilt by association, whereby the accused was guilty by having any membership or association with a group on the Attorney General’s List of Subversive Organizations, instead of by their actual actions [1].

In 1951, Truman’s Executive Order 10241 lowered the loyalty standard for dismissal. This took place when the language for the standard of evidence shifted from “reasonable ground” [9] to “reasonable doubt” [30, 421]. The previous government order required a sufficient amount of evidence to illustrate some degree of disloyalty, but the new government order required only evidence to *suspect* individuals. Despite this looser standard of evidence, this Executive Order was still unable to quell attacks from the Republicans, who would take control of the executive branch in 1952.

When the Republican President Dwight Eisenhower was inaugurated in January 1953, he set up the lowest loyalty standard used in dismissal decisions within the federal government [30, 421]. In 1953, under Executive Order 10450, a worker could be disqualified if the individual was not “clearly consistent with the interests of the national security” [10]. The dismissal standards were now expanded to include not only the existing Attorney General’s List, but also treason, subversion, espionage, drug addiction, sexual indecency, conspiracy, and refusing to testify by citing the self-incrimination [30, 421]. The new standard consisted of nearly all behaviors that were not deemed normal or acceptable within society [7, 96]. Additionally, this change transitioned the burden of proof from the government to the individual. Instead of the government verifying disloyalty, individuals had to prove their loyalty in order to avoid being associated with the broad list of dismissal categories listed in Executive Order 10450.

One effect of the steadily lowering loyalty standard was that many federal employees underwent

multiple loyalty reviews despite previous clearance. For example, more than 9,300 employees were cleared after being investigated in 1947, but approximately more than 30 percent of their cases were reopened in 1951. Between the peak of 1947 to 1956, the program investigated more than five million federal employees, which culminated in 12,000 resignations and the dismissal of around 27,000 individuals [29].

The Federal Loyalty Program might have removed a small number of workers who legitimately posed a threat to the nation, but in reality it was the successively lowered criterion for disloyalty that caused many to be barred from employment on unreasonable grounds. In 1951, when Truman addressed the threat of communism by establishing the loyalty program, the Supreme Court ruled that this program was constitutional. This decision signified that all three branches of the government could create initiatives to target and oust suspected communists, which further helped to propagate hysteria within society [29].

### C. The Judicial Branch

During the Second Red Scare, the Supreme Court also succumbed to societal pressure related to the anti-communist fervor and allowed the infringement of the accused’s civil rights. Between 1950 and 1956, communists cases, such as *Dennis v. United States*, illustrated that the justices shared similar beliefs with the public with regard to the heightening fear over international tensions, the threat of domestic communism, and the danger the Communist Party posed to the nation’s security [30, 434]. Withstanding this ideological and hysterical pressure would require tremendous wisdom and composure. Unfortunately, the majority of the justices in this time period lacked this ability. Ordinary judges were much more vulnerable if the Supreme Court justices could yield to the pressure [30, 429]. As Chief Judge Learned Hand declared, the threatening “American Communist Party[’s] ... violent capture of all existing governments is one article of the creed of that faith, which abjures the possibility

of success by lawful means” [30, 431]. This remark indicates how deeply indoctrinated the judges were to the widespread negative portrayal of the communists within society. Furthermore, these prejudicial beliefs influenced the court, ultimately leading them to approve the infringement of communist supporters’ First Amendment rights. These judges ruled the communists would have a special status under the Constitution, with diminished civil rights and justified this decision by declaring that it was vital to ensure the survival of the federal, state, and local governments [30, 406]. With limited rights, the federal, state, and local governments were able to unconstitutionally investigate, question, and harass the accused. The judicial branch allowed the unconstitutional actions of the government to impinge upon the civil liberties of the accused and make unsubstantiated claims that further framed the mindset of the public. The three branches of the national government all played a role in the spread of distorted facts surrounding the communist threat to the public and created numerous programs and policies that targeted and punished suspected communists. More misinformation would spread when a single individual, Senator Joseph McCarthy, emerged as a leader of anti-communist sentiment in the early 1950s, in the period known as McCarthyism.

### III. Senator Joseph McCarthy

As a junior Republican senator from Wisconsin, McCarthy sought to get reelected and make a political name for himself by exploiting the fear of communist threat and publicly accusing many individuals of being communist traitors without any tangible evidence. These accusations and the effects they had on people’s livelihoods and reputations intensified the anti-communist paranoia within this period.

In February of 1950, McCarthy delivered a provocative speech at the Republican Women’s Club in Wheeling, West Virginia, which propelled him to fame. In this speech, he affirmed that “[w]hen a great democracy is destroyed, it will not be from enemies from without, but rather because of enemies from within” [17]. After delivering this statement, McCar-

thy waved a piece of paper and claimed, “I have here in my hand a list of 205 ... names that were made known to the Secretary of State as being members of the Communist Party and who nevertheless are still working and shaping policy in the State Department” [17]. Thus, within this space, he informed the public that there were communists in the highest reaches of government and highlighted the importance of rooting out these suspected members.

Upon closer examination, McCarthy’s speech contained multiple pieces of misinformation that helped to perpetuate panic across the nation. For example, he claimed there were a handful of communists in the state department. Although there were indeed members of the communist party in this agency in the 1940s, most had already been discovered prior to this speech [18]. Moreover, McCarthy falsely claimed that the number of Soviets had grown uncontrollably from 180,000,000 to 800,000,000 people between 1944 and 1950 [17]. This number was an example of exaggerated and distorted information that was extracted from the Republican Representative Richard Nixon’s comments to the House of Representatives weeks prior to the speech. Lastly and most importantly, McCarthy lacked substantiated information and was inconsistent with his facts. For example, the number of communists in the State Department constantly varied, from 205 to 57, 81, and 110 [7, 93].

Despite the inaccuracy and the exaggerations, McCarthy received the publicity and the headlines he craved. When pressed for details, he did not immediately provide them and instead assured reporters that he would check his files and list some names. With no names and no lists, the lies nonetheless failed to undermine the legitimacy of McCarthy’s statements, because once a reporter had gone through a story, McCarthy would provide a new startling one [20]. For example, on July 25th, 1950, *Lansing State Journal* reported on McCarthy’s claims that “McCarthy (R-Wis) declared today he has air-tight proof that an important state department official – a Moscow-born “Mr. X” – is a Communist ... [which

was] one of the 81 covered by the state department loyalty files” [12].

With his newfound influence, McCarthy’s power further expanded when he chaired the Senate Permanent Subcommittee on Investigations in 1953 and 1954 [5]. This position enabled him to operate in complete freedom as the sole authority to further launch investigations into communists and continue making unfounded claims. McCarthy’s influence became a new level of intimidation in which he could subpoena, interrogate, and threaten anyone as he wished, from Harvard graduates to the editor of the *New York Post*. HUAC did not even have this power and no one dared to challenge or oppose McCarthy’s accusations, including President Dwight Eisenhower in his initial response [3].

McCarthy’s targets included government officials, celebrities, intellectuals, or anyone who condemned and opposed his actions and viewpoints. The victims would be accused by McCarthy as being communists and traitors. For instance, on July 3rd, 1954, *Statesman Journal* recorded that when McCarthy failed to substantiate his accusations and got criticized by Democrats, McCarthy then followed by labeling his attackers as “a green light to the red fifth column in the United States” [28]. The damaging effects of McCarthyism came to light when the Wisconsin Republican Senator falsely accused his critics of being traitors that paved the path for the threatening red fifth column (domestic communists that would assist external communists), successfully permeating the impression that communists loomed in all parts of the nation. The majority of McCarthy’s targets were falsely accused, and many suffered damages to their reputation and employment, which they had difficulty recovering from [27]. McCarthy’s continuous and unscrupulous attacks on powerful individuals (such as General George Marshall and President Dwight Eisenhower), as well as institutions (such as the State Department and the US Army) would eventually contribute to his downfall: the Army-McCarthy hearings [7, 94].

Although there were indeed a handful of communist members within the nation, such as in the state department, ironically, McCarthy never named anyone who was found guilty of subverting the government. His demagogic tactics successfully contributed to the climate of unfounded panic and suspicion that Soviet citizens had infiltrated every part of society. This overblown and tense climate paved the way for the fraudulent portrayal of the threat of the Rosenbergs.

#### IV. The Rosenberg Case

Julius and Ethel Rosenberg’s case in the early 1950s magnified the anticommunist hysteria and was incorrectly labeled as the “Crime of the Century” [15, 2] because this case lacked tangible evidence and was erroneous and overblown.

In 1949, the United States detected suspicious radiation from a reconnaissance flying mission between Japan and Alaska, where the Soviet Union had been secretly testing their first atomic bomb. Further investigations showed that it was the same bomb that the United States had tested in 1945. Although estimates fluctuate, it was said that the Soviets could not have developed the weapon until 1953 or 1954. Espionage saved the Soviets from the time-consuming process of discovering this information for themselves and enabled them to speed up the development of the bomb two to three years in advance [8]. This discovery had huge implications. First, it closed the military technological gap between the Soviet Union and the West, which heightened the panic among Americans over its own nuclear monopoly. Second, it demonstrated that the Soviets had infiltrated to the highest reaches in the top-secret Manhattan Project. By intercepting and deciphering encrypted messages, the Venona Project (a counter-intelligence program) discovered that Klaus Fuchs (a British physicist affiliated with the Manhattan Project in Los Alamos) had passed on top-secret information on the development of the atomic bomb [25]. Fuchs confessed to this crime, which then led to a series of arrests: Harry Gold, David Greenglass, and eventually Julius and Ethel Rosenberg [15, 4].

In 1951, the US District Judge Irving Kaufman sentenced the Rosenbergs to death because he firmly believed that the Rosenbergs had conspired to commit espionage by providing the Soviets with secrets to the A-bomb, which he considered a “crime worse than murder” [30, 433]. Kaufman blamed the Rosenbergs for the 50,000 American deaths in Korea and affirmed their “betrayal ... undoubtedly have alter[ed] the course of history to the disadvantage of our country” [30, 433]. This belief captured the distorted perception among the judicial system as well as the public regarding the threat of the Rosenbergs. The perception, however, was based on many minor and false pieces of evidence that were used against the Rosenbergs in their trial.

While Julius may have indeed leaked valuable information and headed a spy ring within the Manhattan Project, the Rosenberg case was based mainly upon David and Ruth Greenglass’ testimony that lacked evidence and was full of conflicting statements.

David Greenglass, Ethel’s brother, was a member of the spy ring and played an important role in the Rosenberg’s trial. As a highly skilled U. S. Army machinist, Greenglass was sent to the Manhattan Project in Los Alamos in 1944. His job was to mechanically build the parts of the bomb according to the scientists’ sketches. While David was working at Los Alamos, Julius recruited David to provide the Soviets with information about bombs and possible recruits.

In June of 1950, the Federal Bureau of Investigation arrested and questioned David Greenglass. Greenglass admitted to spying and identified his wife, Ruth, and Julius as part of the spying network. Later that year in August, David testified against Julius, stating that the latter was a communist and that he had received gifts from the Soviets. In addition to this, David repeatedly affirmed that he “never spoke to my sister [Ethel] about this at all” [23]. David’s denial of his sister’s alleged involvement and a lack of verified evidence created a weak case against Ethel. Despite this, the FBI still arrested Ethel in August 1950 for the purpose of threatening her husband to

confess [13]. As J. Edgar Hoover, the director of FBI, explained, «[I]f Julius Rosenberg would furnish details of his extensive espionage activities, it would be possible to proceed against other individuals. [P]roceeding against his wife might serve as a lever in this matter» [13]. However, to no avail, the imprisonment of his wife did not lead to the cooperation of Julius. This forced the government to change its course and pursue Ethel as a co-conspirator in the espionage case [13].

Days prior to the beginning of the Rosenbergs’ trial in 1951, David Greenglass altered his earlier testimony [25]. In exchange for no indictment or prosecution against his wife and a reduced sentence for himself [19], he claimed instead that Ethel aided Julius in recruiting David in 1944 and was present during certain espionage exchanges [25]. Additionally, he claimed that Ethel “did the typing” [23] for classified information in 1945 [25]. In her testimony, Ruth corroborated David’s claim of Ethel’s role as a typewriter [22]. Even though the Greenglass’ change in their stories regarding Ethel’s role conflicted with David’s previous testimonies, it was a significant action that allowed the prosecutors to incriminate Ethel and impose the death penalty on both Rosenbergs [15, 25].

In future interviews with a New York Times editor and reporter, David revealed that he indeed committed perjury because he was pressured by the prosecution to do so and he wanted to save his wife from prosecution [13]. He later stated, “I frankly think my wife did the typing, but I don’t remember... My wife is more important to me than my sister. Or my mother or my father, O.K.” [19]? In this way, David’s new testimony provided false evidence for the prosecuting team to incriminate and impose the death penalty on the Rosenbergs, which perpetuated fraud and stoked public fears surrounding the security of the country. Not only was the fact of Ethel’s role inaccurate, but also the importance of the atomic sketches exchanged between David and Julius was overstated.

The prosecutor's exaggerated the claim that the high explosive lens mold sketches that David handed to Julius and Gold enabled the Soviets to build a bomb. David testified that he passed information, including which scientists were working on the Manhattan Project, the number of people participating in that project, the names of possible recruits for spying, and four sketches that depicted the A-bomb, which he reconstructed as Exhibits 2, 6, 7, and 8 [15, 5]. Some of the information had already been declassified (such as the names of the scientists and the number of people working in the project), while others were still classified (such as the sketches of high explosive lens and descriptions of the implosion experiments and the A-bomb) [2, 391].

However, although the bomb's description was undisclosed, the leading scientists at the Manhattan

Project claimed the sketches were accurate only in vague and general terms and could not be labeled as vital secrets or accurate representations [15, 9–10]. Despite this information, the prosecution asserted that the most important sketch, Exhibit 8, which depicted a cross-section of the implosion-type bomb, was the core of the A-bomb (View Figure 2) [15, 5–6].

There were many fallacies related to this sketch and its descriptions, such as the lack of relative or absolute dimensions; inaccuracies surrounding the purpose of beryllium; and the absence of tamper, polonium, and other crucial elements [15, 10–11]. These omissions and errors resulted in the drawings to have minimal value. Not only was Exhibit 8's significance exaggerated, but also the implosion concept's importance was distorted too.

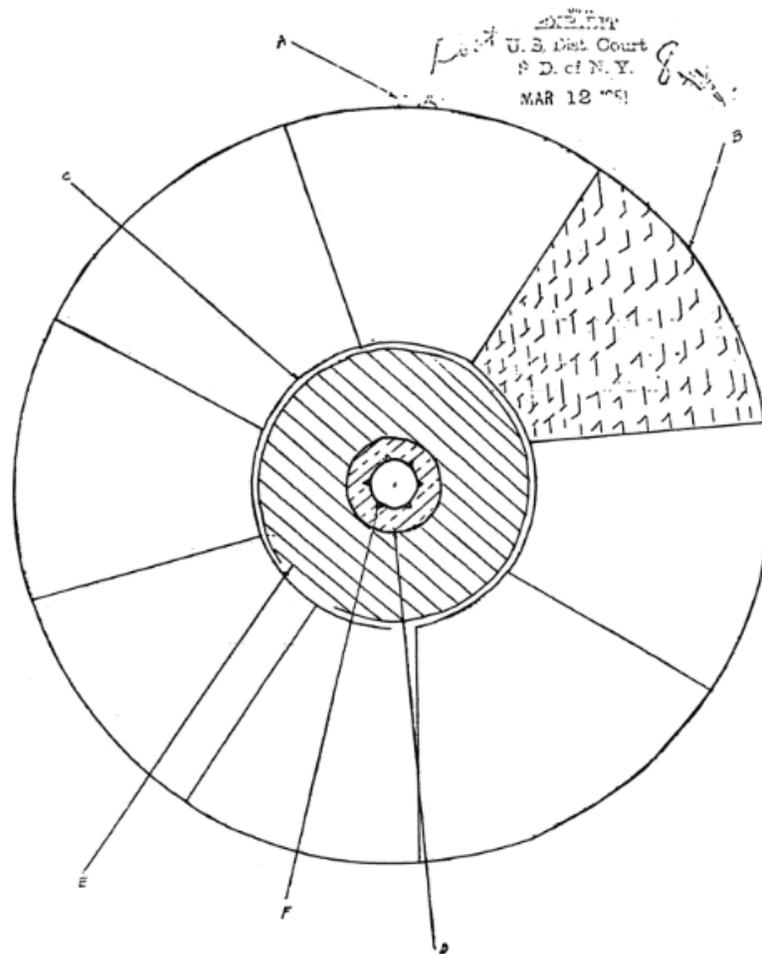


Figure 2. Exhibit 8: Cross-Section A-Bomb

It was claimed that Exhibits 2 (lenses), 6 (lens mold), and 7 (tests for experimenting lenses) revealed the vital concepts of implosion that later were adopted in bombs. However, the idea of implosion, or merging shock waves towards the center, had been known since 1792. The principle was later revived in 1888 and employed during WWII. In 1951, after David's testimony, *Scientific American* examined his claims and pointed out the concept of using the implosion idea on bombs had already existed. The Russians craved not for the concept, but the absolute scale of the models and the technical parts, which David could not provide [15, 14–15]. Thus, the prosecution falsely claimed David disclosed the essential implosion idea because the principle was not new.

Not only were the sketches incorrect and the implosion concept timeline problematic, but also the witness for Exhibit 8 was unreliable because it was an electrical engineer not a scientist [15, 8], the nuclear physics facts were already exchanged internationally prior to the United States acting as a nuclear monopoly in WWII [15, 16], and David incorrectly labeled Exhibit 6 (an experimental set up) as a high explosive lens.

Even though the FBI and the Atomic Energy Commission realized the flaws and the unreliability of the materials, this still did not ease the public's judgment over the guilt of the Rosenbergs [15, 22–23]. That was because Prosecutor Irving Saypol's opening speech had already laid the foundation on what the prosecution, conviction, and execution would be premised upon:

We will prove that the Rosenbergs devised and put into operation with the aid of Soviet Nationals and Soviet Agents in this country, an elaborate

scheme which enabled them to steal through David Greenglass this *one weapon, that might well hold the key to the survival of this nation and means the peace of the world, the atomic bomb* [15, 2].

With these statements, Saypol aimed to prove that the Rosenbergs were guilty of espionage because he desired to forge a connection between the nation's security and the threat it faced at home, from leftist dissenters, and abroad. In order to obtain that goal, Julius had to confess and incriminate others, so the prosecution followed by pressuring David to commit perjury in order to impose a death penalty and incriminate Ethel [15, 23–25].

Emmanuel Block, the defense attorney for the Rosenbergs, anticipated the prejudice that would arise and pleaded with the jurors in his opening statement to not be “influenced by any bias or prejudice or hysteria” [21]. However, to no avail, the AEC, FBI, and the prosecutors collaborated together and used fallacious and inconsequential evidence to claim that the Rosenbergs committed a treasonous crime, which further heightened the national tension in this period.

## V. Conclusion

During the Second Red Scare, the central government, Senator McCarthy, and the case of the Rosenbergs did uncover some domestic communists, but the actual threat of communism within the United States within the 1940s and 1950s was largely inaccurate and exaggerated. Therefore, the public's paranoia surrounding the communist threat was mostly unfounded. As the Second Red Scare waned, Americans would continue to fear communism, but this period motivated many to reevaluate their nation's ideals and examine society and the government's role in using unjustified fears to violate civil liberties.

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## THE REASONS BEHIND THE MASS INCARCERATION IN THE U.S.

**Abstract.** This essay analyzes the factors that led to the high mass incarceration trend in the United States. This work claims the main contributors to the trend were the rise in prison admission, lengthened sentences, and racial inequalities.

**Keywords:** America, Criminal Justice System, Mass Incarceration.

At the NAACP conference on July 14<sup>th</sup>, 2015, President Barack Obama commented, “So let’s look at the statistics. The United States is home to 5 percent of the world’s population, but 25 percent of the world’s prisoners” [7]. The high incarceration rate of the United States is historically unprecedented and has been unmatched internationally in the past five decades. After 50 years of stability, the incarceration rate began to soar nationally, rapidly, and continuously at the beginning of 1970 (See figure 1). The imprisoned population reached a peak in 2009 with an incarcerated population of 2.29 million people, with 1.5 million people held in state and federal prisons. The growth only stabilized recently with the number of imprisoned people in federal and state prisons falling after 2012 [11].

Although high incarceration rates have a high correlation to crime rates, since the crime rates were rising a decade prior to the increase of mass incarceration in the 1970s, the crime trend alone cannot explain the high rates of incarceration. Other Western countries saw a rise in crime rates as well without matching the United States’ incarceration rates. Even as the crime rate began to decline in the 1990s, the imprisoned population continued to soar. The drastic changes in the criminal justice sys-

tem were instead due to a combination of increasing crime rates and public concern about crime and disorder. The rising public anxiety resulted from political and social unrest, such as that surrounding the anti-Vietnam war movement. Politicians felt pressured by the public, so to appeal to these voters they enacted more punitive policies and launched campaigns, such as the war on crime and war on drugs, to target the “root causes” of crime [16, 109]. The booming mass incarceration trends were mainly due to the rise in prison admission, lengthened sentences, and racial inequalities.

A contributing factor to the booming mass incarceration is increased prison admission, especially the increased incarceration of drug offenders. As the War on Drugs campaign continued to heighten, prison admission increased, resulting in the booming prison population of the 1980s. From 1980 to 2000, the arrests for drug-related crimes increased by 350%, with a crime rate of 3 per 100,000 people in 1980 to 35 in 2000 (See figure 2) [2; 14, 51, 56]. In 2020, drug offenders make up 46% of the Federal prison population [Federal]. Most offenders had no violent criminal records, and the number of arrests simply due to the possession of drugs was rising (See figure 3). In fact, more than four-fifths of the drug arrests were for possession [2].

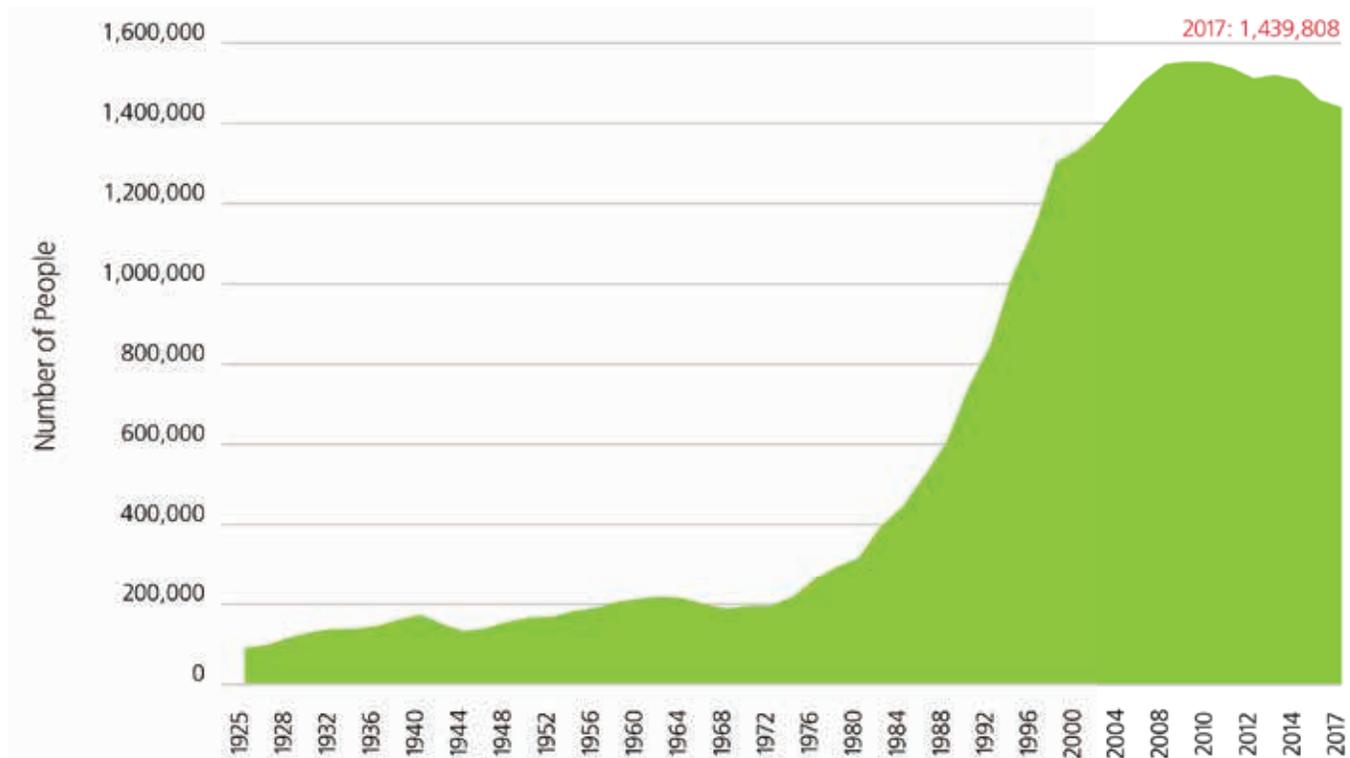


Figure 1. U. S. State and Federal Prison Population from 1925–2017 [11]

The increased criminalization of drug-related violations can be attributed to the War on Drugs campaign launched by President Richard Nixon in 1971. He announced, “America’s public enemy number one in the United States is drug abuse” [10]. Politicians fed on the growing public anxiety about drug abuses, and they described the drug users as plaguing both the offenders’ personal and societal issues, such as crime, economic, and social problems. In the 1980s, President Ronald Reagan escalated the War on Drugs campaign, even as the rate of drug addiction was falling. With the new enactment of tougher federal laws such as the Anti-Drug Abuse Act of 1986 and 1988, there was a shift in public attitude. In 1986, less than 2% of the American people viewed illegal drug abuse as an urgent and vital problem, but two years later, the majority of the public identified drug use as a major problem afflicting the United States [16, 120]. As public attitudes about drug use shifted profoundly, the Democrats soon joined the War on Drugs. Drug-related problems dominated national political debates as politicians competed on who

could be the toughest on drugs. With the politicians trying to appeal to anxious voters, more people were arrested for drug-related crimes.

As public concern continued to increase, politicians advocated to lengthen criminal sentences that further contributed to the booming mass incarceration. Sentencing reform movements aimed at making the sentencing outcomes more “uniform”, “neutral”, “certain”, and “severe” [15, 78; 16, 108]. From the mid-1970s to the mid-1980s, Democrats and Republicans rejected “indeterminate sentencing,” which allowed individualized sentences without a defined length of sentencing, replacing it with “determinate sentencing,” which set a fixed amount of time in prison [15, 71, 74]. The reason behind this decision was that indeterminate sentences were arbitrary and inconsistent. Then, from the mid-1980s through the mid-1990s, sentences became harsher, with mandatory minimums, the truth-in-sentencing law, the three strikes law, and life without parole contributing to the steep incline of the imprisoned population. All but one state adopted mandatory minimum laws,

which typically required prisoners to be imprisoned for 5, 10, and 20 years for drug and violent crimes. The federal government and more than half of the states authorized the truth-in-sentencing law, which typically required people to serve a minimum of 85 percent of their sentences without parole. The same number approved the three strikes law, which usually required at least 25 years of sentencing for people on their third felony conviction. Sometimes even

life sentences resulted from minor crimes (8; 15, 73, 101). Almost all states enacted life without parole laws in the 1990s, which resulted in the quadrupling of prisoners with life sentencing from 1984 to 2016 with 1 in 7 people serving life sentences [6]. These laws took discretion away from the judges, pushing them to sentence nonviolent offenders with harsh punishments. The combination of these harsh penal policies helped drive mass incarceration.

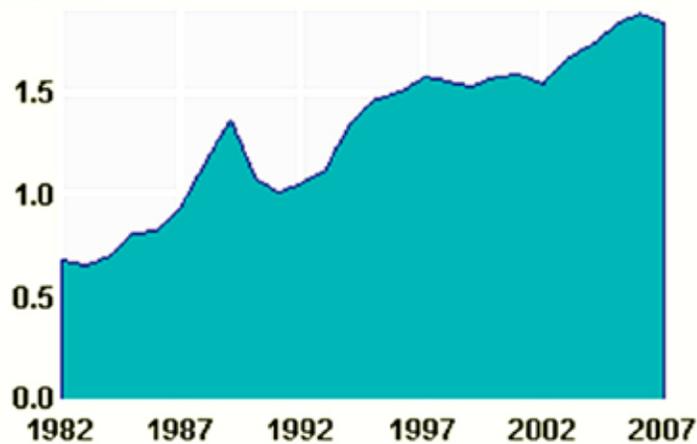


Figure 2. Number of Drug Abuse Violation arrests from 1982–2007 [2]



Figure 3. Drug Arrests Violations from 1982–2007 by types [2]

The criminal justice system has disproportionately affected racial minorities. Young men with very little schooling were especially impacted by economic and demographic changes. The United States has a long history of racial prejudices in its criminal justice system. Due to a combination of racial and educa-

tional factors, young, non-college-educated, male minorities have experienced a sharper increase in their incarceration rate than have white Americans since the 1970s (See figure 4). In 2010, around 15 percent of African Americans with no college education between the ages of 20 and 39 and around a

third of high school dropouts or less schooling had served time in prison, while only around 4 percent of white men who had never been to college and 10 percent of white high school dropouts or less schooling were incarcerated (See figure 5); [14, 65–66].

Structural changes to both the urban economy and demographics affected the police's treatment of young black Americans concentrated in poor neighborhoods. During the 1970s and 1980s, unemployment rates in urban communities increased as manufacturing and industrial jobs were exported abroad. International industrial competitions from rival manufacturers in Japan and Europe led to the closure of manufacturing and mass layoffs of low-skilled workers [1; 16, 127–128]. In addition to the loss of jobs due to international trade, the demographic makeup of poor urban communities were

also shaped by the suburbanization of middle-class working families and immigration of Latin Americans. Middle-class working people moved out of the cities to the suburbs, leaving the poor concentrated in the cities. The arrival of large numbers of undocumented immigrants from Mexico and Central America also changed the makeup of America's cities. With fewer economic opportunities, young men resorted to drug dealing and other illegal activities. Heroin, cocaine, and crack cocaine became widespread, causing a rise in criminal activities in the 80s and 90s, subjecting the minorities to increased police scrutiny [16, 128; 13, 25]. The economic and demographic changes disproportionately affected vulnerable, non-college educated, young minorities, causing them to engage in illegal activities such as drug deals.

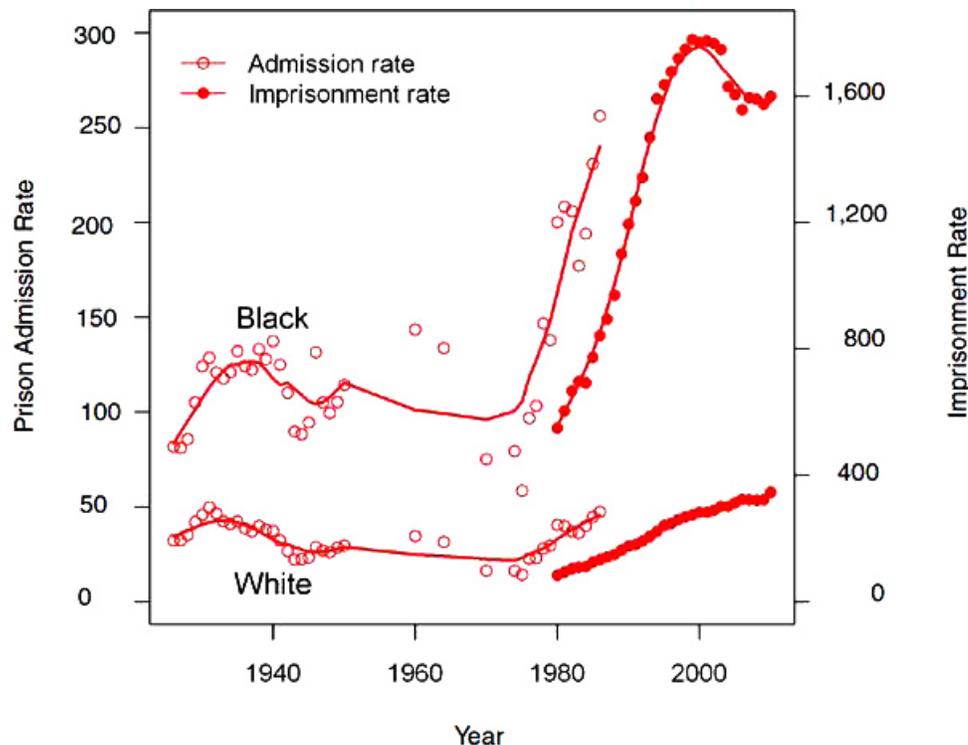


Figure 4. Prison Admission Rate from 1926–1986 and Imprisonment Rate from 1980–2010 for black and white people [14, 57]

Since the early 1970s, African Americans have been more likely to get arrested than white people for drug-related crimes due to the misrepresentation of crack cocaine in the media. In 1989, the

drug-related crime rates for black people were approximately 2,500 per 100,000, while for white people it was roughly a sixth of that (See figure 6); [14, 61]. However, the difference in drug use

among African Americans and the white population is not considerable and there is limited evi-

dence suggesting black people sell more drugs than white people [14, 50].

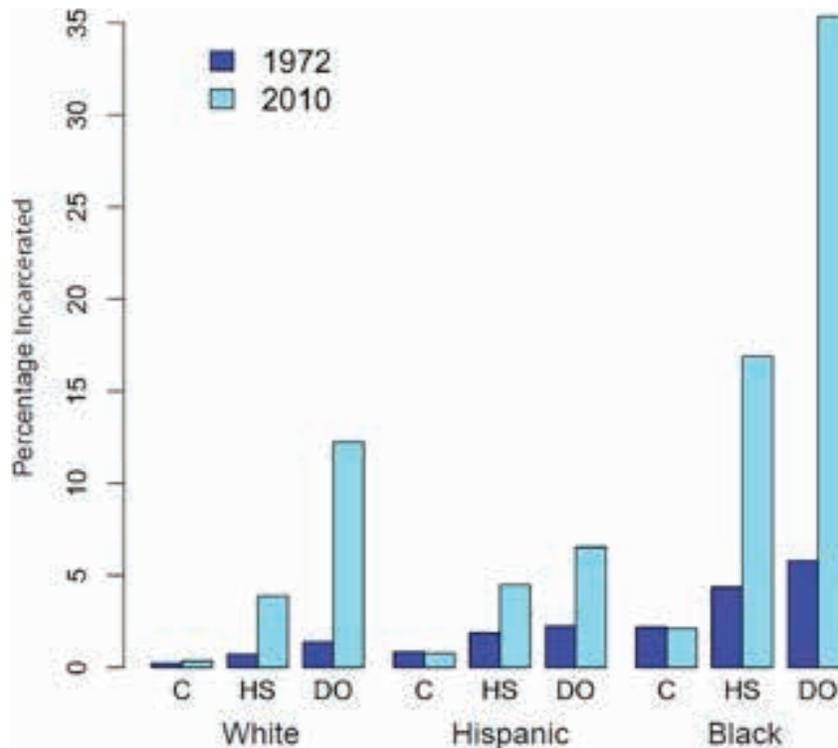


Figure 5. 1972 and 2010 Prison and Jail incarceration for men ages 20–39 [14, 65]

Notes: C = Some College; HS = All Noncollege Educated; DO = High School Drop Outs or Less Schooling

The policies became racialized and sentencing laws associated with the war on drugs campaign further widened the racial disparity. For example, the Anti-Drug Abuse Acts of 1986 and 1988 established minimum sentencing for crack and powder cocaine with a ratio of 100 to 1, which means possession of 500 grams of cocaine or 5 grams of crack cocaine will set a five-year mandatory minimum sentencing even if there was no intention of selling it [5]. As a result of this sentencing, 85 percent of the individuals punished for possession of crack cocaine were black offenders in 2002, even though the majority of crack cocaine users were white or Hispanic [9]. The media distortedly presented crack cocaine as more addictive and more likely to instigate violence than other drugs or forms of the same drug, such as powder cocaine. This belief became widespread among the American public even though there was

no evidence supporting such claims and crack cocaine and powder cocaine have the same chemical components [3]. Widespread misinformation about crack cocaine and the public hysteria it caused led politicians – especially Congressional candidates running in the 1986 midterms – to ratify the 100-to-1 rule that disproportionately resulted in the rising incarceration of black people.

In conclusion, mass incarceration can be mainly attributed to the rise in admission rates, lengthened punitive sentencing laws, and racial disparities. The combination of these three factors caused an increasing number of people, especially young, non-college educated African Americans, to get arrested and imprisoned for longer periods of time. However, mass incarceration further aggravates the problems poor marginalized groups experience, does not increase public safety, and requires

large amounts of public resources. Therefore, it is important to raise the public's awareness and push

policy makers to modify the current criminal justice system.

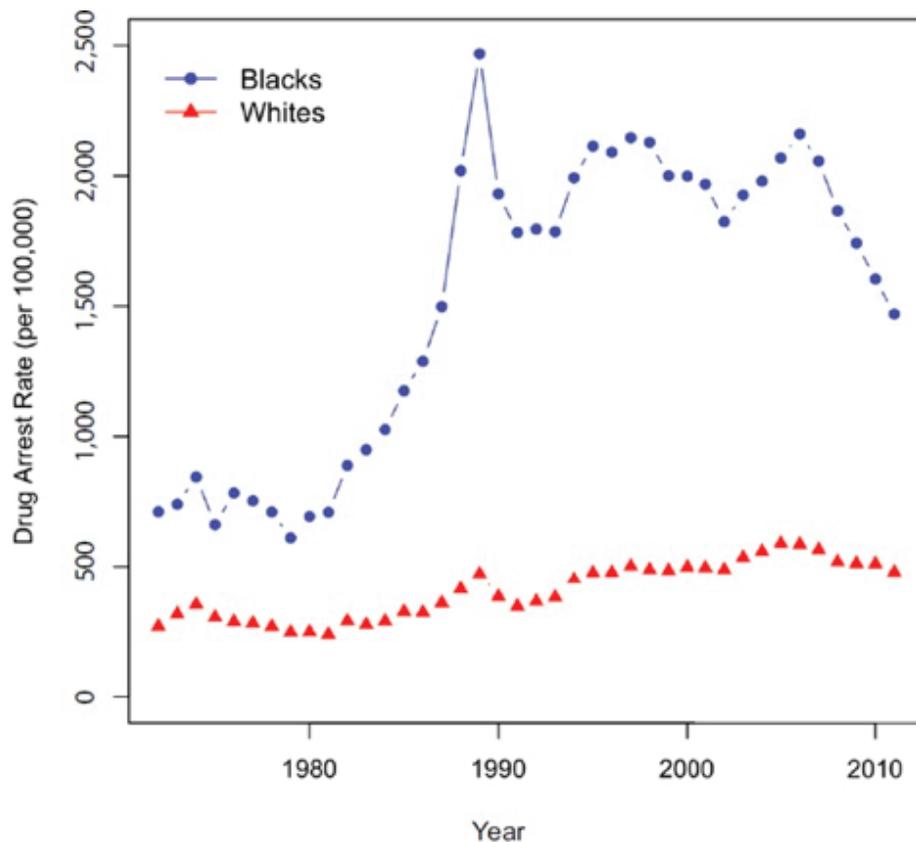


Figure 6. Drug Arrest Rates for Blacks and Whites from 1972–2011 [14, 61]

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## LENI RIEFENSTAHL'S FILMS AS HISTORICAL SOURCES

**Abstract.** The article analyzes the films of the German film director Leni Riefenstahl “Triumph of the Will” (1935) and “Olympia” (1938). The author proves that these films are of scientific value and can be used as historical sources.

**Keywords:** Leni Riefenstahl, “Triumph of the Will”, “Olympia”, historical source, propaganda, national socialism.

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## КИНОЛЕНТЫ ЛЕНИ РИФЕНШТАЛЬ КАК ИСТОРИЧЕСКИЕ ИСТОЧНИКИ

**Аннотация.** В статье анализируются фильмы немецкого кинорежиссера Лени Рифеншталь «Триумф воли» (1935 г.) и «Олимпия» (1938 г.). Автор доказывает, что данные киноленты несут научную ценность и могут быть использованы в качестве исторических источников.

**Ключевые слова:** Лени Рифеншталь, «Триумф воли», «Олимпия», исторический источник, пропаганда, национал-социализм.

С приходом в 1933 г. в Германии к власти национал-социалистов кинематограф, как и все сферы культуры, был подчинен государству. В 1933 г. из Имперской палаты культуры выделилось подразделение Имперской палаты кинематографии. Не членам Имперской палаты было запрещено участвовать в любом виде кинематографической деятельности: от начала производства до выхода ленты в свет. Главным управляющим киноинду-

стрией в Германии стал министр народного просвещения и пропаганды и президент Имперской палаты культуры Йозеф Геббельс.

Говоря о кинематографе Германии 1930-х гг., невозможно не упомянуть личность Лени Рифеншталь (1902–2003 гг.), ставшую, по сути, символом кинематографического мира эпохи национал-социализма. Лени Рифеншталь вошла в историю как личный документалист Гитлера, а ее работы

до сих пор вызывают споры и дискуссию в научной среде. Знаменитые киноработы Рифеншталь – «Триумф воли» (1935 г.) и «Олимпия» (1938 г.) – являются, несомненно, одними из самых значимых фильмов в истории человечества. Такое заявление отнюдь не голословно, что доказывается наличием различных исследовательских работ относительно жизни и творчества Л. Рифеншталь. Это также говорит о том, что киноленты Рифеншталь до сих пор активно просматриваются и обсуждаются.

Вокруг личности Лени Рифеншталь и ее работ ходят множество различных слухов, касаемо ее политической ориентации и направленности ее фильмов. Кем на самом деле была Лени Рифеншталь? Патриоткой, верившей в возрождение Германии или авантюристкой, желавшей снимать фильмы за счет государственного финансирования? Какой посыл несут фильмы однозначно талантливой, но противоречивой режиссера – документалистика или пропаганда?

В настоящее время в исторической науке представлено немного, но достаточно исследований, авторы которых пытаются определить моральную и документальную составляющую кинолент Лени Рифеншталь. Безусловно, говорить об их объективном анализе нельзя, так как всегда имеют место субъективизм и личные взгляды на подобные противоречия, особенно, когда речь идет о таких философских категориях, как «добро» и «зло».

В данной статье мы не будем пытаться отыскать истину или впадать в крайности. Целью исследования является анализ фильмов «Триумф воли» (1935) и «Олимпия» (1938) с точки зрения исторического источника. Какую научную ценность несут данные киноленты, могут ли они быть полезны для историков и использоваться как исторические источники в исторических исследованиях – на все эти вопросы мы отвечаем в нашей статье.

Безусловно, нельзя говорить о «Триумфе воли» и «Олимпии» как об исключительно документалистике, так как первоочередной задачей

Гитлера, несомненно, было донесение до масс информации о мощи и силе НСДАП, т.е. пропаганда национал-социалистических идей. Данные фильмы нельзя отнести к какому-либо определенному жанру. Здесь присутствует документальное освещение реальных исторических событий, сопровождающееся элементами художественного повествования. За пропаганду отвечали лидеры Третьего рейха, а Рифеншталь, будучи режиссером, выполнявшим государственный заказ, не могла оказать серьезного влияния на внутреннее содержание фильмов, так как она должна была лишь перенести все события на пленку, но сделать это настолько тонко и ненавязчиво, чтобы зрители думали, что сами дошли до идей национал-социализма. Стоит признать, что Рифеншталь проявила себя не просто как профессионал своего дела, но и как гений, осуществив настоящий прорыв в сфере операторских съемок и монтажа.

«Триумф воли» был рожден волей случая, столкнувшегося вместе Гитлера и Рифеншталь. Весной 1932 г. Гитлер ответил на письмо Рифеншталь, в котором она выразила свое восхищение его выступлением во Дворце спорта, и пригласил ее на встречу [3, 139]. В дальнейшем они часто встречались и лично, и на общих собраниях лидеров НСДАП и их друзей.

«Триумф воли» – фильм о VI съезде НСДАП в Нюрнберге, проходившем 5–10 сентября 1934 г. С первых минут перед зрителем предстают кадры старейшего довоенного города Нюрнберг [1]. Известно, что 2 января 1945 г. город подвергся сильному авиа-налету, в результате которого было разрушено до 90% средневековых зданий. Данные кадры имеют ценность, ведь они показывают «оригинальный» облик Нюрнберга до превращения его в руины. Город был отстроен спустя 9 лет после войны, однако, несмотря на сохранение первоначального облика, он больше не представляет собой то, что было раньше.

В фильме продемонстрированы образы многих деятелей Третьего рейха. Так, на кадрах можно

увидеть самого А. Гитлера, министра пропаганды Й. Геббельса, рейхсфюрера СС Г. Гиммлера и т.д. Также ценную информацию передают эпизоды проведения партийных съездов и парадов. Заседание партии началось с выступления заместителя фюрера Рудольфа Гесса, который объявил минуту молчания в память об умершем президенте Германии П. фон Гинденбурге [1].

Для исследователей молодежных организаций Германии периода национал-социализма, несомненно, будут представлять интерес сцены с изображением лагерей Гитлерюгенда и самих юных последователей Гитлера [1]. По кадрам можно определить примерный возраст членов Гитлерюгенда, их занятия и развлечения.

Далее идут сцены парадов различных социальных и военных организаций. Например, большой интерес представляют эпизоды смотра бойцов трудовой службы, руководителем которой был Константин Хирль. На смотре бойцы трудовых отрядов маршируют с лопатами [1]. Целью создания данной организации было снижение безработицы путем введения обязательной для всех граждан мужского пола 19–25 лет трудовой повинности.

В ночной сцене с выступлением штурмовых отрядов (СА) и их лидера Виктора Лютце для передачи атмосферы величия и мощи штурмовиков была использована пиротехника [1].

С особым размахом представлен марш штурмовых (СА) и охранных (СС) отрядов на площади Луитпольд. Зритель наблюдает, как проходил торжественный обряд освящения штандартов СА и СС [1]. Гитлер прикасался к краям знамен солдат своим личным флагом, оставшегося со времен Пивного путча 1923 г.

Киноленту «Олимпия» (1938 г.) по праву можно назвать гимном совершенству человеческого тела. Фильм посвящен XI летним Олимпийским играм, проходившим в Берлине 1–16 августа 1936 г. Германия стала первой страной, задокументировавшей Олимпийские игры на пленке. Проведение международных игр в Берлине было

хорошим поводом для германской власти показать силу и величие национал-социализма.

С первых кадров «Олимпии» зритель оказывается в древних Афинах, где перед ним предстают развалины Парфенона и силуэты греческих богов: Аполлона, Афины, Афродиты и других. Невероятное зрелище представляет сцена с изображением скульптуры «Дискобол», которая постепенно оживает и сменяется фигурой атлета [2]. Этими кадрами фильм провозглашает культ тела и представляет Германию преемницей классической Греции.

В XI Олимпийских играх приняло участие 51 государство, такие как Япония, США, Австралия, Аргентина, Бразилия, Египет, Индия, Греция, Великобритания, Франция, Финляндия, Югославия и другие. Любопытно, что во время представления участников спортсмены из отдельных стран приветствовали зрителей свойственным для нацистов жестом поднятия руки вверх (Австрия, Италия, Франция), другие же обошлись снятием головных уборов (спортсмены из Швеции, Великобритании, США) или прикладыванием руки к голове (Япония, Индия) [2].

Доказательством того, что фильм не несет своей целью расовую или национальную дискриминацию являются сцены, демонстрирующие победы представителей других рас. Так, Рифеншталь запечатлела сцены побед афроамериканца Джесси Оуэнса [2], ставшего четырехкратным чемпионом XI Олимпийских игр. Несмотря на нетерпимость Гитлера по отношению к представителям «неарийских» рас, эти кадры не были вырезаны из фильма.

Большую часть экранного времени в исследуемых фильмах занимают реальные непостановочные сцены. По некоторым исследованиям в режиме реального времени снималось 9/10 фильма [4], и лишь оставшаяся часть была постановкой, что является важным показателем («Триумф воли»). В фильмах продемонстрирован взгляд современников на происходившие события, а также содержится визуальный образ лидеров НСДАП, организации парадов и соревнований.

Таким образом, фильмы Лени Рифеншталь, несмотря на явный окрас политической пропаганды, несут в себе научную ценность и могут быть использованы исследователями в качестве исторических источников.

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## **JEWISH GHETTOS DURING WORLD WAR II: CREATION, PECULIARITIES OF FUNCTIONING, EVERYDAY LIFE**

**Abstract.** This article focuses on one of history's most tragic periods – the politics of the Holocaust. The author reveals such issues as the establishment of ghettos and their characteristics, and the everyday life of the Jewish population in the quarters specially organised for them. The aim of the article is to reveal the essence of the organisation and activities of Jewish ghettos during the Holocaust and World War II policies.

**Keywords:** the Holocaust; World War II; Jews; ghettos.

### **Introduction**

World War II, which began in 1939 and lasted until 1945, culminated in the final defeat of fascism. Victory in the major military conflict of the 20<sup>th</sup> century served as a way of shaping social progress. The policy of mass extermination during the Holocaust and World War II occupies a prominent place in historical scholarship. The reason for this is that the events of the Holocaust and the topic of Nazi ghettos are relevant today. Moreover, these phenomena have been one of the leading reasons for many countries in defining their identity. World War II was the greatest catastrophe of European Jewry, the greatest in its history.

### **Main part**

World War II is a tragic event in world history. The military confrontation that took place between 1939 and 1945 is one of the largest and bloodiest phenomena in history known to mankind. Nazi Germany used all of its resources to inflict a crushing defeat on enemy countries: forced labour in Nazi-occupied territories, gas chambers, gallows and crematoria. There are many terms and concepts in his-

tory that reflect the course of a particular historical event. One commonly used term, mostly used in our research, is the term “ghetto”.

The term “ghetto” is considered to be a special term. It comes from the name of a specially created Jewish quarter, established in Venice in 1516. The area was surrounded by specially created walls and was situated in the most unattractive part of the city near a foundry. Later, ghettos were created in Switzerland, Germany, France and the Czech Republic.

At the start of World War II in 1939, ghettos were urban quarters, usually fenced in. They served as a place where the Nazis moved the Jewish population and where the Jews lived in the most disadvantaged conditions. This is the term they used to refer to the entire towns designated for the Jewish population as part of the “final solution to the Jewish question”. This programme was implemented as part of the Wannsee Conference held in Berlin in 1942 [5].

A. Hitler drew on centuries of anti-Semitism dating back to ancient times. Germany was defeated in the First World War and was forced to pay a multi-

billion dollar contribution to the Entente countries. The amount of reparation payments was outlined in the articles of the Versailles Peace Treaty of 1919. It was Article 235 that referred to the payment of 20,000,000,000 billion gold marks to Germany [2]. In addition, the most humiliating part of the Versailles Treaty, known as the “War Guilt Clause”, was published on May 7, 1919, which held Germany fully responsible for instigating the War of 1914–1918 [3]. With the help of the extensive ghetto system, the Nazis were able to isolate entire Jewish communities from the so-called non-Jewish, i.e. Aryan population, considered, in Hitler’s view, a privileged, i.e. “superior race”. The Nazi German leadership and the countries of the Nazi bloc succeeded in creating around 800 ghettos, mostly in Eastern Europe [3].

The organisation of Nazi “ghettos” during the military campaign of 1939–1945 is a step in the creation of an extensive system of concentration camps and death camps. This is due to the fact that the “ghettos”, in our opinion, served only as an intermediate stage in the mass extermination of the Jewish population.

This circumstance can be explained by the fact that in the 1930s, Reinhard Heydrich, the head of the RSHA, the General Directorate of the Imperial Security, issued an “urgent dispatch”. This document was a kind of instruction, which stated the need for urgent measures and methods of their implementation in relation to the Jews in the occupied territories of Europe. Heydrich argued that a distinction should have been made between the final objective in solving the “Jewish question”, which, in his opinion, was to take a long period of time, and the stages of implementation of the final objective, which would take a short period of time [4, p. 173–178].

The Nazis began actively resettling Jews in a specialised part of the city, usually fenced and guarded. Without a special permit, Jews were forbidden to leave the ghetto. An interesting fact is that all Jews who entered these quarters were forced to work hard labour. The Nazis created around 1150 ghettos in the annexed territories of Europe [4, p. 173–178]. Consequently,

the Nazi policy of “ghettoisation” took place in several stages. At each stage the Nazis carried out their first attempts at a “final solution to the Jewish question”.

There is no doubt that after the defeat of the Polish state in September 1939, the Nazi leadership of Germany launched a campaign of mass terror in that territory. The main goal of the Nazis was to exterminate the Polish population, and the Germans intended to use what remained of it as a free labour force for forced labour.

This fact is proven by the fact that the free access to the ghetto in Łódź, which is located in Poland, was closed on May 1, 1940. In November 1940, the Warsaw ghetto was also closed. In addition, by 1941, ghettos were created in Silesia, Bendzin, Krakow, Sosnowiec, and Radom. An extensive system of ghettos was also created in the territories of the USSR invaded by Germany. The method of isolation, the guards inside the ghettos varied from place to place [5, p. 56–57].

In November 1939, the Warsaw district was separated from the outside world by a 3.5 – meter brick wall and rows of barbed wire. The events were facilitated by the signing of an order by Ludwig Fischer, the future governor of Warsaw, on 2 October 1940 to create a “Jewish residential district” [6]. L. Fischer was appointed Governor of Warsaw already in 1939 as part of the Governor General’s Office. And in November 1940, he was already in charge of a project to organise the Warsaw ghetto. It should be noted that Fischer adhered to the policy of mass terror directed against the Jewish population and Poles [7].

In addition, the rules were imposed on those who lived in the ghetto, which forbade people from leaving their quarters without permission; if they didn’t, they were threatened with execution. In addition, all the Jews who lived near Warsaw were relocated to the Warsaw ghetto. There were about 450,000 people living in an area of four square kilometres. About 3% of the entire city area was earmarked for an “isolated Jewish quarter” [6].

The Warsaw ghetto was a kind of concentration camp with a well-organised structure. The Jewish population lived in an area reserved for them, and entry and exit to the ghetto was completely blocked. Violating any of the rules set down by the Nazis was punishable by death. In effect, the entire population of the Polish state was “cut off” from the outside world.

An example that the ghettos were something synonymous with the word “concentration camp” is the story of the establishment of the Minsk ghetto. The ghetto of Minsk was created in July 1941. There were three camps in the city itself at the same time: the Big Camp, the Small Camp, and the Sondergetto. Each person was allotted an area of no more than 1.2 meters. The main aim of the Nazis was to exterminate the prisoners according to a premeditated and methodical plan, as the massive extermination of large numbers of people could cause a strong outcry and result in a general uprising for liberation.

Initially, the most enterprising and educated citizens of the ghetto were exterminated. The only link that was not subjected to the cruel policies of the Nazis was the medical workers. This was reflected in the fact that in an extreme epidemic, the Nazis were able to control disease peaks among the prisoners with the help of doctors. Moreover, the Jewish quarters were completely fenced off. On pain of death, prisoners were prohibited from approaching the fence. Medical drugs and chemicals were tested on the prisoners. The Jews became “expendable material” in Wehrmacht policy.

The policy of exterminating the Jewish population was also carried out in Hungary. In Budapest, the capital of the Hungarian state, the entire Jewish population was initially forced to live in special houses called “David Star houses” and later in 1944 the entire Jewish settlement was sealed off from the outside world. Some 63,000 Jews were forced to settle in an area of 0.26 square kilometres.

The ghettos located in Krakow and Lodz were the most massive in terms of numbers. For example, a stone wall encircling the ghetto in Krakow was made

in the form of a Jewish tombstone. As for the Łódź ghetto, its territory was guarded by Germans and the Jewish police. It was strictly forbidden to leave the ghetto [5, P. 58].

According to documentary sources of the city of Riga, a special ghetto was organised for the Jews, the boundary of which was Liela, Katolų and Kalna streets. Jews were denied the right to leave their quarter. Any attempt by the Jews to establish contact with citizens living outside the “settlement line” was impossible, as the entire area was completely fenced off [8].

Conditions in the ‘quarters’ were intolerable. Unsanitary conditions prevailed everywhere, and the population was exhausted by the numerous punitive actions of the Nazis. The ghetto, over time, began to take on the character of a Nazi concentration camp. This was because the legal documents of the Nazi leadership reflected the reactionary nature of the “final solution” to the Jewish question. It should be noted that most of the issues related to the terms Holocaust and “ghettoisation” are very relevant today, as historical documents are being declassified and previously unknown data about the victims of Nazi aggression during World War II is emerging. Research is still being carried out to this day.

The Nazis appointed a “Judenrat” in each of the specially organised “localities” for Jews. This term, translated from German, meant a specially formed “Jewish council” that was organized by the Nazis in the annexed parts of Eastern and Western Europe. This governing body mainly consisted of citizens who had, in the pre-war period, held a certain place in Jewish community life. All the activities of the Judenrat were recorded in the service documents of the Germans.

Firstly, among the official sources we can refer to the “lightning directive” that was sent directly by Reinhard Heydrich. This document was addressed to Einsatzgruppe commanders in Poland from 21 September 1939 [5, P. 72]. The document regulated the concentration and relocation of the Jewish population from villages to large cities where Jewish ghettos already existed.

Secondly, the regulation on the establishment of Jewish councils of November 28, 1939 [9] can be regarded as the main legal act. This document stipulated the organization of local governments under the control of the Third Reich.

The head of the Judenrat was given certain administrative functions in the ghetto, but most often he was just an executor of Nazi orders and decrees [9]. The local authority was, in a way, a prisoner of circumstance. This is because it was responsible to the Nazi leadership for everything that went on in the ghetto.

Most of the Judenrat members had hoped to the very end that they, Jews like them, would try to act in the interests of the Jewish community. The representatives of the local government believed that cooperation with the German authorities would grant them and their family members some kind of privilege [5, p. 74–75].

The main task of the Judenrat was to cooperate with the Nazi authorities and to provide the Jewish population with food, social and medical care. It is indicative of the fact that members of the Judenrat were immediately executed for disobeying orders from the Nazi authorities.

A prime example is the events in the Lvov ghetto, where three of the four representatives of the ‘Jewish Council’ were shot. In addition, in the Vilna and Minsk ghettos two chairmen and several members of the Judenrat were sentenced to death. In the ghettos of Lida and Monastyrshchina the representatives of the first organs of self-government were shot in their entirety. Over time, both the Jewish police and the Judenrat, were forced to take responsibility for sending Jews to forced labour and transporting them to concentration and death camps. This fact confronted the officers with a kind of moral choice. It was not uncommon for members of the police and the Judenrat to commit suicide.

For example, a member of the Judenrat in the Warsaw ghetto, Shmuel Siegelboim, committed suicide by writing a suicide letter. It was in this letter that the deputy of the Polish National Committee expressed

his emotions about the events of the 1939–1945 war campaign. S. Zigelboim writes: “I want with my death to express my deepest protest against the inaction with which the world allows it to be destroyed” [5, P. 211]. In addition, Adam Czerniakow, head of the Warsaw ghetto, committed suicide after learning about the mass deportations of ghetto inmates to the death camps. The case of the chairman of the Judenrat in Nowogródek, where 48 of its members were shot for refusing to collaborate with the Nazis, is also emblematic.

In the Vinnitsa region, a unique case was recorded in the ghetto of Zhmerinka where Adolf Gershman, head of the local government, was able to save the lives of over 3,000 prisoners. The reason for this is that the ghetto was controlled by the Romanian side and Gershman himself had provided legal assistance to the praetor of Zhmerinka before the war in 1939–1945. Consequently, the Jews were trying to protest the occupation regime of the Third Reich. Equally interesting is the everyday life of the Jewish population. The constant cold and disease claimed the lives of tens of thousands of ghetto inhabitants.

Paula Garfinkel, for example, originally from Lodz, was forcibly removed to the Lodz ghetto with her family of four children. The Garfinkel family was given one room to live in the area, where six people were supposed to live. Paula recalled that there was not enough food for everyone in the ghetto because the Nazis had restricted the supply of vital foodstuffs: bread, oil, and potatoes. For this reason she was forced to take a job in a women’s clothing factory. It was precisely from the window of the factory that she was able to see the long-awaited meal for which she could have been shot. Paula Garfinkel’s account gives us a glimpse into what happened in the Łódź ghetto during the Second World War.

It is worth noting that similar incidents happened in the Łódź ghetto on a number of occasions. For example the diary of one inhabitant of the “Jewish Quarter” tells us that three families had to live in a room which was 4 meters wide and 6 meters long. The eyewitness described in detail that people slept

on three “floors”: on the table, on the floor and on the bed [10, P. 60]. There are many other accounts which describe such a horrifying situation.

For example, Tamara Rostovska, a prisoner of the Kaunas ghetto, managed to keep a diary which described in detail the events that happened to her and her family in Kaunas. T. Rostovska was a teenager when the Second World War began. The girl notes that there was a ban on carrying goods of any kind into the ghetto, which was guarded by the police. Electricity was also cut off from the ghetto. Panic was growing in the “Jewish quarters” as most residents were uncertain about the future [11, P. 121]. Tamara Rostovskaya recalled: “Terrible uncertainty. Scary. Better death than the unknown” [11, P. 6].

The diary of Maria Rolnikaite, one of the inmates of the Vilnius ghetto, should also be mentioned. In her diary the girl describes the events that took place in the Lithuanian capital during the Second World War. Marija described in detail the situations of the inhabitants of occupied Vilna. Rolnikaite noted that the Nazis posted various kinds of orders everywhere, urging Jews to surrender their property. If people tried in any way to keep their valuables, a firing squad was imminent [12, P. 6]. In addition, the residents of Vilna were obliged to wear insignia with the letter “J” [12, P. 7].

It is representative of the fact that the Jewish population was subjected to a contribution of five million rubles [12, P. 9]. A curfew was also announced until nineteen o'clock. In addition, people received neither sugar nor sunflower oil [12, P. 9]. There were constant inspections in the ghetto. M. Rolnikaite recalled one of them in detail, during which a list of all the inhabitants of the “Jewish quarter” was made public, mainly the elderly, who were taken out of the ghetto. The Nazis attributed this fact to the fact that these Jews were not an able-bodied population, as they were fifty years of age or older; they were subsequently forced to deport them to another camp. Later it turned out that this was another deception on the part of the Germans. People were simply shot [12, P. 68].

Using personal sources, we have been able to see the restrictions to which the ghetto inhabitants were subjected, and what the psychological state of its inhabitants was like. The ghettos resembled concentration camps, as the territory was guarded and most ghettos were inaccessible to enter and leave. Nevertheless, we do not believe it is possible to call the Jewish Quarter a concentration camp. This is due to the fact that life in the ghetto was still going on for most people.

This phenomenon is supported by the fact that most young people tried to continue their education by attending clubs and classes organized by the most educated people. Usually, lectures or classes were held in secret from the Germans, because they were forbidden. Most pupils learned to hide books under their clothes in order not to be apprehended. Attention should be drawn to the fact that Alfred Rosenberg, a German politician, one of the chief ideologists of the NSDAP, and who was head of the Ministry for the Occupied Eastern Regions from July 17, 1941, issued a legal act. It stipulated that all ghetto inhabitants, namely men and women aged 14–60, were to be employed as forced labourers [14, P. 192].

Interestingly, the entire population of the “Jewish quarters”, with the exception of the Jews, were paid for their work. This was the main difference between Jewish forced labour: it was not paid. In our opinion, this fact showed that the Nazis had literally turned the Jewish population into their “slaves”. A female inmate of the ghetto recalled that people were forced to work every day except Sundays or when the Germans were massacring the local population. It was almost impossible not to work in the ghetto, as one could simply die of starvation. The bread ration for the Jewish population was half that of the rest of the population.

It is representative of the fact that in the Warsaw ghetto about 18,000 people were employed by Walter Tebens, who specialised in dressmaking and leatherwork. One of the workers in his factory recalled that it was not uncommon for the owner to come to work drunk, with a “scourge in his hand”. People were forced to work for 12 hours a day. If the

goods were faulty they had to be reworked outside normal working hours. “Guilty workers” were subjected to beatings. In the Warsaw ghetto workers were paid two bowls of soup and up to five zlotys a day. In addition, there were secret factories in the Jewish quarter, which were hidden in buildings and basements. Basically, they worked at night. It was they who supplied the Polish market with fabrics, finished mittens, brushes and much more. Raw materials for the production of these goods were brought in from Lodz, Tamashuv [15, p. 23–24].

Thus, Nazi Germany attempted to consistently exterminate large numbers of the Jewish population in the occupied countries of Central and Eastern Europe. Most of the Jews were able to work. The Nazis, using the Jews as a free labour force, tried to stabilise and enrich the economy of the Third Reich with cheap labour. The people who populated the Nazi ghettos were forced to work almost every day in factories and plants, at dangerous sites, risking their own lives. It was

the performance of hard physical labour that subsequently led to the deaths of a large proportion of the population in the Jewish quarters. The ghettos were temporary points in the “final solution to the Jewish question”. Despite all the hardships the Jewish population endured during World War II, 1939–1945, people managed to retain their humanity. Even in the “Jewish quarters” normal everyday life continued – people continued to receive education, children continued to play with toys, and many attended theatres and art exhibitions. Of course, the conditions created by the Nazis for the Jews were unbearable – overcrowding, hunger, mass epidemics. Most of the population simply could not make a new start in the face of extreme daily life. Many found solace in their work, which was at times the only source of survival. The ghettos were only a temporary stage in the “big politics” of the Third Reich. It was the “Jewish quarters” that managed to prolong the lives of many – children, the elderly, teenagers, women and men, albeit briefly.

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## Section 3. Mathematics

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### THE FIELD'S GENERAL DYNAMIC EQUATION AND SOME APPLICATIONS

**Abstract:** Till now, the field theory hasn't general dynamic equation for describing the changing rate of a common variable. This made in many occasions the mathematical model from point concept is applied unsuitably. In this article, by limit method, the general dynamic equation in field is established. And then gives out several applications. Among them, a discovery even appears for the distributive function  $f(x, y, z, v_x, v_y, v_z, t)$  which shows that the original one – the famous Boltzmann transport equation for plasma etc. is faulty.

**Keywords:** field, flowing, Boltzmann transport equation.

**Part 1:**

**The establishment of the general dynamic equation in field:** Take a common macroscopic lump  $\Omega_{(t)}$  in field as the study object. After a varying time  $\Delta t$ , the lump  $\Omega_{(t)}$  move to a new site and

shape  $\Omega_{(t+\Delta t)}$ , an arbitrarily appointed common physical quantity  $\Theta_{(t)}$  (can be a vector) in  $\Omega_{(t)}$  would be changed to  $\Theta_{(t+\Delta t)}$ , sign  $\Theta$ 's density as  $\theta$ , then the changing rate of  $\Theta_{(t)}$  in  $\Omega_{(t)}$  can be calculated strictly by limit method as following (in  $N$ -dimension):

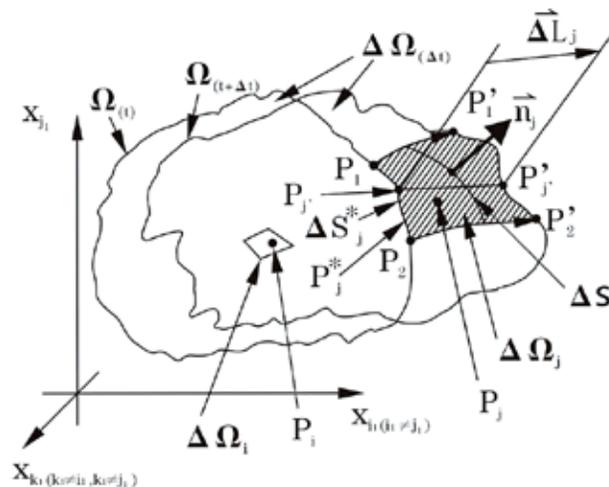


Figure 1.

$$\frac{d}{dt} \Theta_{(t)} = \frac{d}{dt} \iint \dots \int_{\Omega_{(t)}} \theta_{(t)} d\Omega$$

The position description P inside  $\theta$ 's subscript has been omitted. All the cases in following are the same, except the expression is necessary.

$$\begin{aligned} &= \lim_{\Delta t \rightarrow 0} \frac{1}{\Delta t} [\iint \dots \int_{\Omega_{(t+\Delta t)}} \theta_{(t+\Delta t)} d\Omega - \iint \dots \int_{\Omega_{(t)}} \theta_{(t)} d\Omega] \\ &= \lim_{\Delta t \rightarrow 0} \frac{1}{\Delta t} [\iint \dots \int_{\Omega_{(t)} + \Delta\Omega_{(\Delta t)}} \theta_{(t+\Delta t)} d\Omega - \iint \dots \int_{\Omega_{(t)}} \theta_{(t)} d\Omega] \end{aligned}$$

Separate  $\Omega_{(t+\Delta t)}$  as  $\Omega_{(t)} + \Delta\Omega_{(\Delta t)}$  (Attention:  $\Delta\Omega_{(\Delta t)}$  can has minus parts – to express the parts which  $\Omega_{(t+\Delta t)}$  get into  $\Omega_{(t)}$ 's space).

$$\begin{aligned} &= \lim_{\Delta t \rightarrow 0} \frac{1}{\Delta t} [\iint \dots \int_{\Omega_{(t)}} (\theta_{(t+\Delta t)} - \theta_{(t)}) d\Omega + \iint \dots \int_{\Delta\Omega_{(\Delta t)}} \theta_{(t+\Delta t)} d\Omega] \\ &= \lim_{\Delta t \rightarrow 0} \frac{1}{\Delta t} \sum_{i=1}^{N_1} \iint \dots \int_{\Delta\Omega_i} (\theta_{(t+\Delta t)} - \theta_{(t)}) d\Omega \\ &\quad + \lim_{\Delta t \rightarrow 0} \frac{1}{\Delta t} \sum_{j=1}^{N_2} \iint \dots \int_{\Delta\Omega_j} \theta_{(t+\Delta t)} d\Omega \end{aligned}$$

divide space  $\Omega_{(t)}$  into  $N_1$  little parts:  $\Omega_{(t)} = \sum_{i=1}^{N_1} \Delta\Omega_i$

divide space  $\Delta\Omega_{(\Delta t)}$  into  $N_2$  little parts as picture shows – for every part, it's taken from the little space passed by the correlative little patch surface of  $\Omega_{(t)}$  (symbolize this little patch surface as  $\Delta S_j^*$ ) move to  $\Omega_{(t+\Delta t)}$  during the varying time  $\Delta t$ .  $\Delta\Omega_{(\Delta t)} = \sum_{j=1}^{N_2} \Delta\Omega_j$

$$\begin{aligned} &= \lim_{\Delta t \rightarrow 0} \frac{1}{\Delta t} \sum_{i=1}^{N_1} [\theta_{(t+\Delta t, P_i)} - \theta_{(t, P_i)}] \Delta\Omega_i \\ &\quad + \lim_{\Delta t \rightarrow 0} \frac{1}{\Delta t} \sum_{j=1}^{N_2} \theta_{(t+\Delta t, P_j)} \Delta\Omega_j \end{aligned}$$

Definite integral median theorem: Exist point  $P_i$  in  $\Delta\Omega_i$  and  $P_j$  in  $\Delta\Omega_j$  make the above equation founded under the condition of  $\theta$  is a continuous function in  $\Omega_{(t)}$  and  $\Delta\Omega_{(\Delta t)}$ .

$$\begin{aligned} &= \lim_{\Delta t \rightarrow 0} \frac{1}{\Delta t} \sum_{i=1}^{N_1} \Delta t \cdot \frac{\partial \theta}{\partial t} \Big|_{(t+\xi_i \Delta t, P_i)} \cdot \Delta\Omega_i \\ &\quad + \lim_{\Delta t \rightarrow 0} \sum_{j=1}^{N_2} \theta_{(t+\Delta t, P_j)} \cdot \frac{\Delta\Omega_j}{\Delta t} \end{aligned}$$

The mean value theorem of continuous functions: Exist  $\xi_i \in (0,1), i=1,2,\dots,N_1$  make the above equality founded under the condition of  $\frac{\partial \theta}{\partial t}$  is sub-sistent in  $\Omega_{(t)}$ .

$$\begin{aligned} &= \sum_{i=1}^{N_1} \lim_{\Delta t \rightarrow 0} \left[ \frac{\partial \theta}{\partial t} \Big|_{(t+\xi_i \Delta t, P_i)} \cdot \Delta\Omega_i \right] + \sum_{j=1}^{N_2} \lim_{\Delta t \rightarrow 0} \left[ \theta_{(t+\Delta t, P_j)} \frac{\Delta\Omega_j}{\Delta t} \right] \\ &= \sum_{i=1}^{N_1} \frac{\partial \theta}{\partial t} \Big|_{(t, P_i)} \cdot \Delta\Omega_i + \sum_{j=1}^{N_2} \theta_{(t, P_j^*)} \lim_{\Delta t \rightarrow 0} \frac{\Delta\Omega_j}{\Delta t} \end{aligned}$$

$P_j^*$  is the limit site of  $P_j$  on  $S_{[\Omega_{(t)})}$ .

$$= \lim_{\Delta\Omega_i \rightarrow P_i}^{N_1 \rightarrow \infty} \sum_{i=1}^{N_1} \frac{\partial \theta}{\partial t} \Big|_{(t, P_i)} \cdot \Delta\Omega_i + \sum_{j=1}^{N_2} \theta_{(t, P_j^*)} \lim_{\Delta t \rightarrow 0} \Delta S_j \cdot \mathbf{n}_j \cdot \frac{\Delta\mathbf{L}_j}{\Delta t}$$

The first term  $\sum_{i=1}^{N_1} \frac{\partial \theta}{\partial t} \Big|_{(t, P_i)} \Delta\Omega_i$  is a constant quantity which doesn't change with the varying way of  $\Omega_{(t)}$ 's been divided into  $\sum_{i=1}^{N_1} \Delta\Omega_i$  and the different extent choice of number  $N_1$ .

In the second term: Similar to the mean value theorem in one dimension, it would exist a vector line  $\Delta\mathbf{L}_j$  and a patch surface (curved)  $\Delta S_j$  in  $\Delta\Omega_j$  as shows in the drawing, as well as an unit vector  $\mathbf{n}_j$  on  $\Delta S_j$  ( $\mathbf{n}_j$  is perpendicular to its site's surface part of  $\Delta S_j$ ) make  $\Delta\Omega_j = \Delta S_j \cdot \mathbf{n}_j \cdot \Delta\mathbf{L}_j$  founded –since the product of  $\Delta S_j \cdot \mathbf{n}_j \cdot \Delta\mathbf{L}_j$  can change from less than  $\Delta\Omega_j$  and more than it constantly (Because of  $\Delta S_j$  is curved and  $\mathbf{n}_j$  can be chosen at different site, so  $\mathbf{n}_j$  can has different direction, and this will make  $\mathbf{n}_j \cdot \Delta\mathbf{L}_j$  can change from  $-\Delta L_j$  to  $\Delta L_j$ . At the same time, according different curved shape,  $\Delta S_j$ 's quantity can change from a limited amount to multy times of it also).

$$= \iint \dots \int_{\Omega_{(t)}} \frac{\partial \theta}{\partial t} d\Omega + \sum_{j=1}^{N_2} \theta_{(t, P_j^*)} \Delta S_j^* \mathbf{n}_j^* \cdot \mathbf{v}_j$$

–  $N$  recalculation integral's definition.

–  $\Delta S_j^*$  is the limit site of  $\Delta S_j$  on  $\Omega_{(t)}$ 's surface  $S_{[\Omega_{(t)})}$

– the little patch of  $S_{[\Omega_{(t)})}$  aforementioned to pass form  $\Delta\Omega_j$ .

–  $\mathbf{n}_j^*$  is the correlative unit vector  $\mathbf{n}_j$  on  $S_{[\Omega_{(t)})}$  limit site.

$$= \iint \dots \int_{\Omega_{(t)}} \frac{\partial \theta}{\partial t} d\Omega + \lim_{\Delta\Omega_j \rightarrow P_j}^{N_2 \rightarrow \infty} \sum_{j=1}^{N_2} \theta_{(t, P_j^*)} \Delta S_j^* \mathbf{n}_j^* \cdot \mathbf{v}_j$$

– Since the value of  $\sum_{j=1}^{N_2} \theta_{(t, P_j^*)} \Delta S_j^* \mathbf{n}_j^* \cdot \mathbf{v}_j$  is constant which doesn't change with the varying way of  $\Delta S_j^*$  chosen and the extent choice of number  $N_2$ .

$$= \iint \dots \int_{\Omega_{(t)}} \frac{\partial \theta}{\partial t} d\Omega + \oint_{S_{[\Omega_{(t)})}} \theta \mathbf{v} \cdot d\mathbf{s}$$

–  $N$  multiple closed surface integral's definition (Here the integral is for  $N-1$  dimension).

That is:

$$\frac{d}{dt} \iint \dots \int_{\Omega_{(t)}} \theta d\Omega = \iint \dots \int_{\Omega_{(t)}} \frac{\partial \theta}{\partial t} d\Omega + \oint_{S_{[\Omega_{(t)})}} \theta \mathbf{v} \cdot d\mathbf{s} \quad (1)$$

$$= \iint \dots \int_{\Omega(t)} \left[ \frac{\partial \theta}{\partial t} + \text{div} \Big|_{\text{to } \nu} (\theta \nu) \right] d\Omega$$

Apply Gauss' theorem (refs. 1 and 2) in N-dimension. To realize this, it's need to define:

$$\text{div} \Big|_{\text{to } \nu} (\theta \nu) = \sum_{i=1}^N \frac{\partial}{\partial x_i} (\theta \nu_{x_i}) \quad (2)$$

For every dimension, the unit vector along the corresponding number axis is constant, and can be taken out of the integral or derivative process, and in this way, together with all dimensions,  $\theta$  can be as a vector to make the above equation founded.

$$= \left[ \frac{\partial \theta}{\partial t} + \text{div} \Big|_{\text{to } \nu} (\theta \nu) \right] \Big|_{(t, P^{**})} \Omega(t)$$

Definite integral median theorem:  $P^{**} \in \Omega(t)$ ,

$\frac{\partial \theta}{\partial t} + \text{div} \Big|_{\text{to } \nu} (\theta \nu)$  should be continuous in  $\Omega(t)$ .

So:

$$\begin{aligned} & \lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \frac{d}{dt} \iint \dots \int_{\Omega(t)} \theta d\Omega \\ &= \lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \left[ \frac{\partial \theta}{\partial t} + \text{div} \Big|_{\text{to } \nu} (\theta \nu) \right] \Big|_{P^{**}, t} \Omega(t) \\ &= \frac{\partial \theta}{\partial t} + \text{div} \Big|_{\text{to } \nu} (\theta \nu) \end{aligned} \quad (3)$$

formula 1 and 3 is the field's general dynamic equation with integral form and differential form established here.

## Part 2:

### 1. The influence of reaction and diffusion to flowing course:

This question can be solved easily by separate  $\theta$  into three component parts of  $\theta_0, \theta_r, \theta_d$ , they respectively symbolize the original flowing object matter's part, the birth part from reaction and the diffusion part caused by spreading course. With this disposal, at time t:  $\theta = \theta_0 + \theta_r + \theta_d$ , take it into the left term of formula 3, then can get:

$$\frac{\partial \theta}{\partial t} + \text{div} \Big|_{\text{to } \nu} (\theta \nu) = \lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \frac{d}{dt} \iint \dots \int_{\Omega(t)} (\theta_0 + \theta_r + \theta_d) d\Omega$$

$$= f + R\Theta^* + \lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \oint_{S[\Omega(t)]} Dn[(ds \cdot \nabla)\theta]$$

– Define:  $n$  – the number density.

– Define:  $f = \lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \frac{d}{dt} \iint \dots \int_{\Omega(t)} \theta_0 d\Omega$

– Define:  $R\Theta^* = \lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \frac{d}{dt} \iint \dots \int_{\Omega(t)} \theta_r d\Omega$

$R$  – the reaction rate in unit space of  $\Omega(t)$ .

$\Theta^*$  – the  $\Theta$ 's average value of every single particle born from reaction.

– Apply diffusion law in N-dimension space, by the form of  $Dn[(ds \cdot \nabla)\theta]$ ,  $\theta$  can be a vector.

– Attention: here  $\nabla = \sum_{i=1}^N \mathbf{e}_i \partial / \partial x_i$  (4)

$\mathbf{e}_i$  – is the unit vector along  $x_i$

$$= f + R\Theta^* + \lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \iint \dots \int_{\Omega(t)} \text{div} \Big|_{\text{to } \nu} (Dn \nabla \theta) d\Omega$$

– Apply Gauss' theorem (refs. 1 and 2) in N-D space. Define:

$$\text{div} \Big|_{\text{to } \nu} (Dn \nabla \theta) = \sum_{i=1}^N \frac{\partial}{\partial x_i} (Dn \frac{\partial}{\partial x_i} \theta) \quad (5)$$

$$= f + R\Theta^* + \text{div} \Big|_{\text{to } \nu} (Dn \nabla \theta) \quad (6)$$

$$= f + R\Theta^* + \sum_{i=1}^N \frac{\partial}{\partial x_i} (Dn \frac{\partial \theta}{\partial x_i}) \quad (7)$$

**2. In 3-dimension:** By taking the fluid's particle number density  $n$ , the momentum density  $nm\nu$  (or  $\rho\nu$ ) and the energy density  $n(\frac{i}{2}kT + \frac{1}{2}mv^2)$  into  $\theta$  in formula 6 respectively, a new set equation for dynamic calculation can be established effortlessly as following:

$$\frac{\partial n}{\partial t} + \text{div}(n\nu) = R + \text{div}(Dn \text{grad} n) \quad (8)$$

$$\begin{aligned} & \frac{\partial}{\partial t} (nm\nu) + \text{div} \Big|_{\text{to } \nu} (nm\nu \nu) \\ &= f - \text{grad} p + Rm\nu^* + \text{div} \Big|_{\text{to } \nu} (Dn \nabla \langle nm\nu \rangle) \end{aligned} \quad (9)$$

$$\begin{aligned} & \frac{\partial}{\partial t} [n(\frac{i}{2}kT + \frac{1}{2}mv^2)] + \text{div}[n(\frac{i}{2}kT + \frac{1}{2}mv^2)\nu] \\ &= P - \text{div}(p\nu) + R(\frac{1}{2}mv^{*2} + E^*) \\ &+ \text{div}[Dn \nabla (n \langle \frac{i}{2}kT + \frac{1}{2}mv^2 \rangle)] \end{aligned} \quad (10)$$

$f$  – The forces act on an unit space fluid except the pressure  $p$ .

$p$  – The fluid's pressure.

$P$  – The power of energy input to an unit space fluid except the pressure  $p$ .

$\nu^*$  – The average speed of single particle born from reaction.

$E^*$  – The average energy of single particle born from reaction.

**3. Discovery:** In 6-dimension space  $(x, y, z, v_x, v_y, v_z)$ , the speed of flowing can be defined as:

$$\mathbf{\Lambda} = iV_x + jV_y + kV_z + e_1a_x + e_2a_y + e_3a_z \quad (11)$$

Take this speed  $\mathbf{\Lambda}$  as the speed  $\mathbf{v}$  and the distributive function  $f(x, y, z, v_x, v_y, v_z, t)$  as  $\theta$  in formula 3, then can get:

$$\begin{aligned} \lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \frac{d}{dt} \iiint \dots \int_{\Omega(t)} f d\Omega &= \frac{\partial f}{\partial t} + \text{div}|_{to \Lambda} (f \mathbf{\Lambda}) \\ &= \frac{\partial f}{\partial t} + \frac{\partial}{\partial x} (f v_x) + \frac{\partial}{\partial y} (f v_y) + \frac{\partial}{\partial z} (f v_z) + \frac{\partial}{\partial v_x} (f a_x) + \\ &\quad \frac{\partial}{\partial v_y} (f a_y) + \frac{\partial}{\partial v_z} (f a_z) \\ &= \frac{\partial f}{\partial t} + \text{grad } f \cdot \mathbf{\Lambda} + f \text{ div } \mathbf{\Lambda} \end{aligned} \quad (12)$$

(attention: grad and div here is for 6-D space)

$$\begin{aligned} &= \frac{\partial f}{\partial t} + \frac{\partial f}{\partial x} V_x + \frac{\partial f}{\partial y} V_y + \frac{\partial f}{\partial z} V_z + \frac{\partial f}{\partial v_x} a_x + \frac{\partial f}{\partial v_y} a_y + \frac{\partial f}{\partial v_z} a_z \\ &\quad + f \left( \frac{\partial v_x}{\partial x} + \frac{\partial v_y}{\partial y} + \frac{\partial v_z}{\partial z} + \frac{\partial a_x}{\partial v_x} + \frac{\partial a_y}{\partial v_y} + \frac{\partial a_z}{\partial v_z} \right) \end{aligned} \quad (13)$$

The above written equation 13 (or 12) shows that the former equation for the distributive function  $f$  – the famous Boltzmann transport equation (3)  $\frac{\Delta f}{\Delta t} = \frac{\partial f}{\partial t} + \frac{\partial f}{\partial x} V_x + \frac{\partial f}{\partial y} V_y + \frac{\partial f}{\partial z} V_z + \frac{\partial f}{\partial v_x} a_x + \frac{\partial f}{\partial v_y} a_y + \frac{\partial f}{\partial v_z} a_z$  is wrong, it lost the part  $f \text{div } \mathbf{\Lambda}$  which has the obviously true meaning of the speed's difference from the opposite side of an unit cube can charge the particle's number in it. That's the discovery in this paper, it will

be important for many occasions, because normally the flowing speed is always varying in the flowing field.

The reason caused the faulty of Boltzmann transport equation is that it's a point function's changing rate in field essentially, it isn't fair to express the true matter's space changing -the microbody in space isn't fair to be simplified as a point generally.

### Conclusion:

1. The integral form of general dynamic equation in field (for a normal physical quantity with density  $\theta$ ):

$$\frac{d}{dt} \iiint \dots \int_{\Omega(t)} \theta d\Omega = \iiint \dots \int_{\Omega(t)} \frac{\partial \theta}{\partial t} d\Omega + \oint_{S[\Omega(t)]} \theta \mathbf{v} \cdot d\mathbf{s} \quad (1)$$

2. The differential form of formula 1:

$$\lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \frac{d}{dt} \iiint \dots \int_{\Omega(t)} \theta d\Omega = \frac{\partial \theta}{\partial t} + \text{div}|_{to \mathbf{v}} (\theta \mathbf{v}) \quad (3)$$

3. The new transport equation for the distributive function  $f(x, y, z, v_x, v_y, v_z, t)$ :

$$\begin{aligned} \lim_{\Omega(t) \rightarrow P} \frac{1}{\Omega(t)} \frac{d}{dt} \iiint \dots \int_{\Omega(t)} f d\Omega &= \frac{\partial f}{\partial t} + \frac{\partial f}{\partial x} V_x \\ &\quad + \frac{\partial f}{\partial y} V_y + \frac{\partial f}{\partial z} V_z + \frac{\partial f}{\partial v_x} a_x + \frac{\partial f}{\partial v_y} a_y + \frac{\partial f}{\partial v_z} a_z \\ &\quad + f \left( \frac{\partial v_x}{\partial x} + \frac{\partial v_y}{\partial y} + \frac{\partial v_z}{\partial z} + \frac{\partial a_x}{\partial v_x} + \frac{\partial a_y}{\partial v_y} + \frac{\partial a_z}{\partial v_z} \right) \end{aligned} \quad (13)$$

And it shows that the Boltzmann transport equation (3) is faulty. This is the discovery of this paper.

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## Section 4. Political sciences

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### ASSESSING THE STATE OF DEMOCRACY IN THE MODERN WORLD

**Abstract.** Today, the term “democracy” is one of the most controversial and does not have the common model (interpretation) for all the countries. Since, democracy had not had and still does not have one form of carrying democracy out and expression for all. Each country chooses or creates its own form of democracy based on the internal and external characteristics of the country itself. Therefore, the democratic system is more subjective than objective. In this connection, the assessment of modern democracy in this research work will be based on the characteristics of each considered region separately, on their historical development in a particular direction of life.

**Keywords:** democracy, equity, people, representativity, government, state, modern, interpretation.

#### Introduction

In connection with the development of modern society, the understanding of democracy, as well as its perception, has largely undergone changes. The formation of the modern concept of democracy is closely interrelated with the formation of civil society institutions. Today we see that the formation of civil society and the fundamental principles of democracy has a different character depending on the region and country. An important factor influencing the formation of democracy is the mentality, traditions and other characteristics of each nation. In this regard, it is important to compare and evaluate the features of the formation of democracy in the modern world and to determine how much democracy

is changing depending on the region and what their consequences are today.

In this research work, the following methods were applied: general scientific methods, such as dialectical, logical, systems analysis and synthesis, as well as formally – legal, historical-legal, comparative methods.

#### Concept of democracy

Democracy as one of the main values of humanity, as a perception of the world and a form of social life has existed for more than 2.5 millennia. Over the years, the etymology of the word “democracy” has undergone many changes and became the concept open to various interpretations. If the fundamental values of democracy are not questioned yet, some

circumstances are constantly being adjusted. But before we start the analysis of the current state of democracy, we need to remind once again the meaning of the concept. The term itself came from Greek city-states, and literally translated as “the rule of people”. Notwithstanding this, there is no common definition for this concept. For instance, there are more than two thousand descriptions only in English language (Gagnon [4]), and numerous critics there. According to Plato, democracy is the rule of the envious poor. Aristotle did not like democracy either. He saw it as the rule of the majority of the poor citizens in the interests of the exclusive majority. This is the worst form of government, since sooner or later, due to the low culture of people, it turns into ochlocracy, that is, the rule of the crowd. The famous description given to democracy were the one by Abraham Lincoln in the Gettysburg Address in 1863. In the face of the “glorious fallen”, the president swears that “this nation in the state of God will give a new birth to freedom, and that government belonging to the people, exercised by the people and serving to the people will never disappear from the face of the Earth (Dahl [3]).” In another words: “We swear that the lost did not give their lives in vain, that our nation, blessed by the Lord, will gain a revival of freedom, that the rule of the people, determined by the people, will never disappear from the face of the earth for the people (Mehlvilleville [6]).” This formulation expresses various aspects and essential features of democracy, namely: democracy comes from the people themselves; democracy is carried out by the people and in the interests of the people. The feature of democracy as power “for the people” presupposes a perspective in which democracy is understood as the goal of the state, attainable through political and social movement. It is of no importance that this description is the most applicable to the term “democracy” but does it sound as feasible? Moreover, the human history shows that democracy is not a natural way of living for the population of the Earth. In various social state structures, the governing differed in the degree of restrictions

imposed on a person. Despite this, democracy claims to be the most demanded form of government today.

### **Implementation of democracy**

The end of the twentieth century was a triumph for democracy. The disappointment of the population with totalitarian and authoritarian (non-democratic) forms of government, and the socio-economic successes of so-called democratic states emerged the idea of a free prosperous life. However, as we can see, if some changes contribute to the formation of democracy, the economic, social and cultural differentiation erects new barriers for democratic regimes. It turns out that democracy in itself is not a treatment for all the troubles of society (Baranov [1]). But is there any democratic state in the world? Since September 15, 2008, the world celebrates the UN International Day of Democracy. The interim result, in over 12 years shows that the level of democracy in the world has hardly increased (Baranov [1]). As we can see from the Democracy Index data by Economist Intelligence Unit, the number of fully democratic countries were over thirty in 2008 (when this Index was created) and decreased to twenty countries by 2018 (the Economist [7]). Of course, the criteria and the data itself can be arguable and does not show the true statistics. The mechanism of democracy itself can be implemented in different ways. It is worth agreeing with the UN resolution, which established this Day, that “there is no one common model of democracy (Kabanov [5]).” As we can see, any country which cannot be described as neither authoritarian nor totalitarian, can declare itself as a democratic state. If it is so, we are close to lose the phenomena of democracy.

Taking into account the lack of the common model and existence of basic principles of democracy, we cannot disagree with A. Przeworski, who calls democracy as a system of ordered unlimited or arranged uncertainty. This uncertainty is also a threat that can be decisive in determining the fate of democracy. In authoritarian and totalitarian systems, people understand everything: who exercises power, from whom

to expect certain bounties (Przeworski [11]). But in democratic way people mostly confused to identify the governing power. For instance, modern Western political scholars do not consider democracy as the rule of the people, which determines the essence of the implemented state policy. Democracy, in their opinion, is a system of government that takes into account the will of the people, which is expressed at the time of elections of the ruling elite. Moreover, the comparison of approaches to the implementation of democracy in different countries shows that each of them is unique in its own way.

As we used to think that the United States is the brightest example of democratic state, we can see that this title is also became an arguable. Besides, according to the Democratic Index, the USA is in the list of flawed democracies, which means it is not fully democratic (the Economist [7]). At the turn of the 20<sup>th</sup> century, the American progressive movement has set itself the goal of increasing the power of law and strengthening control over government policies. As a result of numerous reforms, women gained the right to vote, the US Senate began to be formed on the basis of direct elections, referendums began to be practiced more widely, and the manageability of local authorities and their accountability to elected officials increased. Despite all of these, most politics says that the American democracy is under the threat. The reason of this might be the rule of the previous president D. Trump. Most politicians and journalists were “wondering” that one person can destroy all the democratic institutes have been building in more than two centuries. Besides the current situation, some scholars assert that the form of decentralized governing does not match with the “features” of democracy, some says that the way of democracy in the US is has too much “freedom” that can impact on the authority of governors. In our opinion, they do choose their own way of democracy and it is, definitely, more suitable for today’s realities, even though they do have the current difficulties. At the same time, we cannot deny the fact of “to

much democracy” in this country, which can lead to more serious issues. For instance, we all are familiar with the “ochlocracy”, that is, the rule of the crowd. Ochlocracy, in our opinion, does not have anything with governance, it is more related to the chaos, to the anarchy, and, as a result, collapse of the country. What the recent protests in the USA in defense of J. Floyd led to? The local population just started to re-write or even erase some facts of country’s history, they attacked the capitol for the first time, they convinced the government to get their way. All those facts show us “too powerful” crowd and “less powerful and manageable” government.

#### **Forms of democracy on the example of several states**

According to the Economist Intelligence Unit, the most democratic state is Norway. Democracy in Norway took root at a rather slow pace and for a long time could not replace the broad powers of the ruling monarchs, including King Harald V. In the 90 s of the last century, the first legislative acts appeared in which Norway was mentioned as a free and independent country. Over time, along with the reign of the king, a legislative body appeared in Norway – the parliament (Storting). There are 169 people from eight political parties which are consisting the Parliament. Despite those features as the low level of corruption, free press and open budget, the information about the salary of the Prime-Minister is open to everyone, so people themselves can trace who does or does not pay taxes. The other bright example of democracy is Sweden. Democracy in this country began from the first decades of twentieth century, and went through a lot of changes. Some of those changes can be: giving a right to vote for women right after men, the mandatory school education for all, free press and movement, equality for all the people. There are subsidies for the small business and press in order to support them and make competitive (Facyt.ua [9]).

Moreover, one of the most socio-economically developed countries of Western Europe is Sweden. The formation of the system of parliamentary

democracy in Sweden took place in the first decades of the 20<sup>th</sup> century. Already at the end of the 19<sup>th</sup> century, popular movements, such as: sobriety movement, free churches, women's movement, labor movement and political parties, emerged in the country. By organizing into groups, it became easier for people to fight for changes in society. As a result, the equal voting right was extended to women in 1921 as well as for men in 1909. Sweden is a free and open society, where citizens have the right to demonstrate, freedom of expression, freedom of the press, the right to unhindered access to natural areas, and the right to control the actions of the authorities. Sweden became the first country in the world to pass a freedom of the press law (Facyt.ua [9]).

Besides the situation in Western part of Europe, we see that the Eastern part of the continent is still in the so-called "transitional" level, which means they are on the way of "becoming" democratic. From this part of the world, we would like to consider two countries as examples: Russia and Hungary. The current situation in Russian Federation makes people confused, how does the country announce itself as democratic one? There is a lot of restrictions in press, there is no freedom of speech (as we know it from the current example of A. Navalnyi), as well as no free movement (people went to demonstration for A. Navalnyi), the rate of people who goes to election is low – 67,54% was in the last presidential elections in 2018 (Wikipedia.org [10]), and we can remember the time of violation from skinheads, those events took place in some autonomy regions of Russia (Ossetia, Chechnya). And there is nothing to say about the situation in small and far regions of the country, how do they live or survive there. Moreover, we can meet Russian citizens all over the world, we are aware about mass movement of local people to another more developed countries, they even move to Kazakhstan in order to find a better place to live. But the issue is not only in the inner policy of the government, also external policy. As we can follow the news about Russia's aggression towards other

countries (Ukraine, Syria, Turkey), breaching the international treaties and pacts, not complying with the UN rules and so on.

One of another bright examples is Hungary. As we have been hearing from news, this country is well-known with their loud announces, and has a lot of contradictions with the European Union's rules. Beginning from the twenty first century, this country became as a transit place for many migrants from Asian and African countries. In order to comply with the EU rules, Hungary had to give an asylum for those foreigners who needed, despite their origin or other factors. But the country was not ready for these and does not have enough resources (even they receive financial support from EU) to share with migrants. Hungary was complaining on the situation with gypsies (cygans), and that they cannot afford another "issue". Moreover, the local population is not satisfied with the current totalitarian government of V. Orban. The reason is lack of freedom, there is no free press (press belongs to the state), the budget covers anything but needs of people, there is no job, all the industry does not work, election is not transparent and so on. But still either Russia, or Hungary claims themselves as democratic states and has all those features. Nevertheless, in the Democracy Index Hungary takes 55<sup>th</sup> place (Baranov [1]). According to the situation in the Eastern Europe we can remind the following descriptions of democracy: J. Beschler calls these problems "distortions of democracies" (Schmitter F. [2]), N. Bobbio – "unfulfilled promises of democracy", F. Schmitter – "threats to democracy" (Schmitter F. [2]), S. Eisenstadt – "the fragility of modern democratic regimes". Probably, Eastern European countries are not ready to move to the democracy by implementing democratic institutions, and just declare themselves so because they do have obligations to be democratic.

One of the less democratic regions of the world can be called – Central Asian countries. And no one denies this fact. According to the Strategy for Central Asia, adopted in 2007, the European Union intends to

promote democracy, human rights, the rule of law and good governance. we do offer to consider two cases: Kazakhstan and Azerbaijan. In case of our country, we clearly see that the country does not have fully democratic regime: the country had been ruled by one person almost three decades till 2019, and then replaced by the person chosen by him; the press is not fully free; the number of people who participates on elections is only 77,4% (in 2019) and on parliamentary even less – 63% (in 2021) (Wikipedia.org [10]); there is no freedom of movement; moreover, current legislation has more restrictions and punishments. Nowadays we can notice some changes in our country, but still there are a lot to change and work on. Even people do think that the government “must” help and support them; and if something cannot be done, each person knows that there is another illegal way to solve the problem. In sum we do receive that we do have. Another country is Azerbaijan, very similar case to ours. The reigns moved from father to son, even father have done a lot for the nation. Current situation in the country can be described as the authoritarian regime with the “presidential” government. Why do we say so? Because recently the president I. Aliyev removed number of “disliked” politicians, arrests and prosecutions after opposition is still continuing, and country places only 148 rank in Democracy Index, lower than Kazakhstan (Freedom House, [13]). In this case F. Schmitter assumes that countries have embarked on the path of democratic transformations have at least two more options for development: the creation of a hybrid regime that combines elements of autocracy and democracy, and the formation of a stable, but unconsolidated democracy (Schmitter F. [2]). But in case of Central Asian region, we do think that there are some changes took a place, at least that in Kazakhstan we do have a new president as well as in Uzbekistan, in Kyrgyzstan people went to strikes, and there is slight path of the freedom of speech and movement.

The one region which is similar to Central Asian countries is Latin American region. The postwar political history of Latin American countries is

characterized by the alternation, intertwining and struggle of two main trends of development: democratic and authoritarian. At the same time, up to the 1980 s. the democratic tendency has almost always been relatively weak in history, in traditions, in the political life of the overwhelming majority of countries in the region. This was expressed in the absence of such forms and manifestations of democracy as political rule in accordance with the will of the majority, the participation of the masses in solving the vital problems of the nation, the free activity of public organizations and movements independent of the ruling circles, the real functioning of the authorities elected by the people. The traditional model of economic development of the countries of the region in the postwar years was state capitalism. This so-called capitalism as a whole system of various forms and methods of government influence on the economy, played an important role in the formation of Latin American private entrepreneurship in its modern form, especially in industries that are directly related to the consumer market. As these functions developed, direct state intervention in the national economy grew. Ultimately, the level of state property in some countries of the region turned out to be very high, reaching 90% of assets in some industries (oil, metallurgical, petrochemical). As we can see from the situation in Latin America, we can presume that the socio-economic growth there almost the same as in our region, with slight difference. The difference is that Latin America is under the influence of the USA, which is the brightest model of democracy and the biggest economy of the world. This fact makes the region to grow faster and develop in more capitalist way. But as we can notice, the current situation in the region is quite dramatic: the increasing poverty, mass movement of local population, public discontents, the high crime level and so on. For instance, the situation in Venezuela, a lot of unrests in the country, disappointment in the current government’s policy, president N. Madura’s

“ineffective” management, the continuing unrests in the country since 2014 against presidential policy (seven thousand people were died). Besides, current situation in Brazil also leaves much to be desired: the crime level is one of the highest in this region, the corruption, the scandalous exposure of the president’s bribery business. Saying about Ecuador, more and more young people are leaving the country in order to find a better life, mostly to the USA or European countries.

In accordance with the data above, we collected about different countries from different parts of the world, we can see that the situation and the condition of “democracy” in each region is totally different. We cannot deny the fact of diverse history, diverse culture, mentality, location and so on. If its fine to give total freedom for people in the USA with some slight restrictions, it cannot be applied in, for example, Azerbaijan. We do claim that, because we do have almost the same mentality, and our people did not get used to have a total freedom. Therefore, this could lead to bigger troubles than current ones: people do not know what and how to use this freedom, and can erect the chaotic situation. And, in opposite, if we do apply authoritarian regime on West European countries or the USA – people will not be able to face this. To summing up, we would like to say that there is no common democracy regime can be applied for all countries, there might be taken into consideration factors which do not allow using the same regime in all countries and regions just because it is right for someone.

As we can see from those descriptions and current “condition” of democracy in different countries above, we do realize that none of them can give an exact definition and open up the meaning of democracy for its current “modern” model. Hence, we offer our own definition, which as we concern, is most suitable for democracy. Democracy is “the compromising way of free expression of non-violating socio-economic and political interests and rights of the population and the government, and simply goes

together towards the common goals of both sides”. From this description we would like to underline that democracy is not the “total rule of people” but it might have some restrictions, in order to not become an holacracy. Besides, the goal for both government and population might be common, and should not be opposite or violating each other’s rights. As we concern, our definition can be the most suitable and applicable for the term of modern democracy, since we do not have one common model.

### **Conclusion**

Summing up this article, we understand that the general heightened interest in democracy, which began at the end of the twentieth century and continues at the beginning of the new century, was caused, first of all, by the massive aspiration of countries that had freed themselves from autocracy to seek a more perfect form of government. Moreover, we see that, even the term democracy sounds more reliable and more prosperous form of governing, it does not applicable for all the countries. We are not acknowledged how it looks “the real” democracy, nowadays. Some countries do not choose this form because it makes their rulers less powerful and the local population less manageable; some countries cannot accomplish this goal because of the mentality and “habits” local people used to have; and others just do think they do have democracy, but in reality, they do have collapse of the main institutes of democracy. If the government allows people freely “express” themselves, it does not necessarily mean that there is a democracy. Thus, turning to the assessment of the modern democracy, we totally agree with the UN, and declare that there is no common model of democracy. But we do not say that there is no democracy at all, we just say that there is no “ideal” democracy as to the early scholars claims, and states do apply their own more resembled and applicable democracy to themselves. Of course, we cannot include those countries which are in the transitional level or which are making a facade of democracy.

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## Section 5. Philology and linguistics

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### METAPHORS IN FOOD ADVERTISEMENTS TEXT

**Abstract.** The authors analyze types of metaphor, which can be found in food advertisement texts, namely metaphor proper, epithet, personification and simile and present approaches to their study.

**Keywords:** metaphor theory, advertisement text, linguistic metaphor, metaphorization.

Advertising is one of the most well-known parts of marketing communication mix. There are other means of getting clients or selling product: sales promotion, public relations, personal selling, word-of-mouth marketing and many others. It is very important to make the text of the advertisement informative and attractive. For this person different strategies are used.

If we consider the text of advertisement, we will see that its authors widely employ either linguistic or extralinguistic means. The last ones include a variety of colours, types of font, pictures and so on. We pay more attention to linguistic means, which include means of stylistic syntax, specific vocabulary, phonetic and semasiological devices. Our aim is to highlight the role of metaphor in food advertisement texts, to specify its varieties, approaches to its studies and functions.

Though metaphor has been in the field of vision of linguists since ancient times, however, in the last decades of the 20<sup>th</sup> century, as Oparina [8] points

out, the study of metaphor went to a qualitatively new level. As reasons, she names the transition of the object into another paradigm of research, which opened up new prospects for consideration of metaphor as an element of language and thinking, and not a way of “decorating” speech.

Metaphor can be considered through the prism of the relationship between linguistics and logic, philosophy and psychology and finally, through cognitive positions.

As for the essence of metaphor, its typology and functions, it is possible to state that there is a huge number of works and investigations conducted by outstanding scholars to whom undoubtedly belong N. D. Arutyunova, M. Black, D. Davidson, M. Johnson, Z. Kövecses, G. Lakoff, V. I. Shakhovskiy, V. N. Teliya, Xu Wen and many others.

Selivanova claims that the main problem with metaphor theory consists in the definition of the mechanism of its formation. Among numerous conceptions, she distinguishes the following: 1) interac-

tionist in two versions: psycholinguistic (Richards) and logical (Black, Vianu); 2) associative (Searle); 3) tripartite mechanistic (Delamare); 4) conceptual and anthropocentric (Apter, Turango); 5) possible worlds (Jolles); 6) synergetic (Apter); 7) anthropometrical (Teliya) [11, 16–17].

Modern studies describing metaphor from cognitive positions allow the specification of the following types: associative metaphor, cognitive metaphor, conceptual metaphor, syncretic or synesthetic metaphor among others.

In our study, we follow the traditional approach to metaphor as a stylistic trope or speech mechanism [2; 5; 7; 12]. Traditional classifications include metaphors associated with nominative human activity. These are language metaphors: simple, detailed, and lexical.

There are other approaches to metaphor study. Some scholars name such types of metaphor, as metaphor proper, epithet, simile, personification and figurative periphrasis [3]. Another classification offered by Galperin includes three classes: genuine metaphor, trite or dead metaphor, and prolonged or sustained [3, 126–127].

Analyzing metaphor, it is important to keep in mind the process of metaphorization. Most of the metaphors stand on the similarity of two objects. The number of elements of metaphor changes, depending on different classification worked out by scholars belonging to different schools and this number can be between two and four. Let us present some of most popular classifications.

Richards [10, 48] describes two of such elements. A tenor and a cover or a vehicle. Lazurenko [6, 14] names three obligatory elements: an initial object, naming object, and the feature that is common for both. Black [1] claims that we cannot focus on more than a single word in which the source of metaphoricity is. This word is the metaphor focus. He names its environment the frame. Ortony [9] names the first element topic and the second vehicle.

Now let us illustrate various types of metaphor in food advertisement texts with some examples. We will present below most interesting cases.

**Metaphor proper** is a stylistic device “based on the affinity or similarity of certain properties or features of two corresponding concepts” [3, 136]. It could be trite or genuine. In the advertisement of juice Tropicana “*Sip you sunshine*” the ground for the metaphorization is the orange/yellow colour of the juice associated with the sun; as orange juice is a typical breakfast drink. Many of the advertisements of this juice include metaphor proper: “*Tropicana. Your daily ray of sunshine*”.

Another good example of metaphor can be found in three advertisements of butter, honey, and marmalade produced by Marmite (see Fig. 1) [14]:



Figure 1. Advertisement of Marmites products

These advertisements include three pictures of the products, which can be spread because of their consistency and are accompanied by the identical inscription to make the text more persuasive.

The function of **epithet** in the text consists in showing the speaker’s emotional attitude towards something and setting the atmosphere. It is descriptive, subjective, and evaluative specifying a certain feature of a thing or phenomenon in question. Semantically epithets are divided into associated and unassociated. Their structure is in detail described by Galperin [3, 154–155], who singles out simple, compound, phrasal and clausal epithet.

Food Company Panera advertises its healthy foods with the help of simple epithets: “*Strong greens,*

*smart colors and mighty protein*". A set of simple epithets (*strong, smart and mighty*) in a laconic form shows positive evaluation of the company products.

**Simile** expressively compares two objects, which have something in common. Yefimov and Yasinetskaya [13, 14] specify the distinction between simile and logical comparison. In the example "*John can run as fast as Jack*" it is a case of a logical comparison, whereas "*Rose is as beautiful as a flower*" is an expressive comparison, i.e. simile. Simile is a variety of metaphor, which has a shared quality of two objects meanwhile metaphor characterizes one object. The formal elements of a simile are a pair of objects and a connective (*like, as, as if, as though, such as, etc.*). Not only conjunctions and adverbs but notional words (nouns, verbs, prepositional phrases) as well as affixes (suffixes *-wise, -like*) and comma – the substitute of a conjunction – can have the function of a connective in a simile.

"Topview" restaurant advertisement "*A good chef must create like an architect and sweat like a bricklayer*" (see Fig. 2) [15] has all the features of simile: two compared classes and a connective "like". This simile discovers that chefs have similarities with both architects and bricklayers.



Figure 2. "Topview" restaurant advertisement

**Personification** is a description of inanimate objects using human traits and behaviour. A sun does not smile and trees do not tremble in fear. Lakoff and Johnson see personification as a device allowing us to comprehend nonhuman entities and experiences with them more easily. They point out that

personification can influence the way we think about nonhuman entities. If we say "*Inflation has robbed me of my savings*" or "*Anxiety attacked me*" we are not only personifying anxiety and inflation. We are also painting them in a negative light and making them a villain [4, 33–34].

A wine brand by the name Terra Vox used the slogan "*voice of the land*" (see Fig. 3) [16].



Figure 3. Advertisement of Terra Vox wine

We think it is a very fitting slogan indeed, because it includes the translation of company name Terra Vox from Latin into English; since the land has no voice, it is an example of personification.

Periphrasis after Galperin is "the re-naming of an object by a phrase that brings out some particular feature of the object" [3, 166]. It can be logical, euphemistic and figurative. Figurative periphrasis is a type of periphrasis based upon either metonymy or metaphor. For example, if you do not want to say someone died you may say that "someone went to see the better world". We have not come across examples of figurative periphrasis in our language material.

Summing up, we can state that most popular types of metaphor in food advertisement texts we can come across is metaphor proper, epithet and simile. Though the function of metaphor is to create images, in advertisement it is used to attract the attention of the potential client or customer. Thus, most popular are associative and language metaphors.

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## Review

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### **SIMONA MONTANARI AND SUZANNE QUAY “MULTIDISCIPLINARY PERSPECTIVES ON MULTILINGUALISM”. BOOK REVIEW**

**Abstract.** Multilingualism is currently presented as a sociocultural phenomenon. Multilingualism poses complex tasks for education to prepare the young generation for life in a multinational and multicultural environment, to develop the ability to communicate and cooperate with people of different nationalities, races, and confessions. The study's authors, Simona Montanari and Suzanne Quay, are exploring the possibilities of a multidimensional approach to the problem of multilingualism. The book is a scientific review of modern articles devoted to the problem of multilingualism. The modern world is characterized by a multicultural environment. The mastery of languages, which are the means of communication and information exchange with the peoples of other countries, is becoming increasingly important. The languages of interethnic communication fulfill an international mission, spiritually and morally bringing people of different nationalities together. Consequently, globalization allows people to learn many languages. It is important to note that, while the majority of authors have similar positions regarding the need to differentiate national / social multilingualism and multilingualism of the individual, studies of individual multilingualism demonstrate different approaches. The authors of the book conclude that multilingualism acts as a means of socialization of the individual, forms the attitudes of empathy and tolerance as a result of the socio-communicative process, organized and developed in a special way, within the framework of a bilingual approach to education.

Multilingualism, as a new socio-cultural phenomenon, is an urgent area of research. Today, knowledge of two or more languages is an important component of the life of society, necessary for the interaction of various ethnic groups and cultures. The essence of the relationship between language and thought has been and remains the cornerstone of the debate among cognitivists of various disciplines. Many linguists of the second half of the 20<sup>th</sup> century believed that language and other cognitive systems

are based on different mental abilities of a person. Multilingualism is an area that has recently gained more and more interest among researchers, because it is one of the main components of globalization, without which the interaction of different cultures is impossible. The definition of multilingualism is as complex as it is controversial. This is partly due to the fact that multilingualism is studied from different perspectives in different disciplines such as psycholinguistics, sociolinguistics, language education

and language planning policy. Thus, we can say that there's no universal definition of multilingualism, because each researcher interprets this phenomenon in accordance with the area of research he is studying.

*Simona Montanari and Suzanne Quay* use analytical, comparative-historical, analogy and abstraction methods to research the topic of multilingualism in their book. According to their definition, the main feature of multilingualism is the ability of a person to use two or more languages in everyday life.

It should be noted that the study of multilingualism began relatively recently. Today, we can say with confidence that multilingualism has become an everyday concept in many countries. However, even a century ago, multilingualism was a deviation from generally accepted norms.

The book is divided into three parts. The first part is called "Part I: Societal Multilingualism: Historical, Political, Economic and Educational Forces in Different World Regions". Throughout the world, the total number of the multilingual population is growing due to globalization, the development of international relations, migration, etc., which determines the relevance of this topic. Multilingualism is an interesting but complex sociolinguistic and psycholinguistic phenomenon. The importance of developing fundamentally new approaches to teaching in this area requires special attention.

The first part of the book includes four publications on the topic of Multilingualism and its aspects. Ahmed Ech-Charfi explores the essence of multilingualism in North Africa in the article "Multilingualism, Language Varieties and Ideology in North Africa".

Bee Chin Ng and Francesco Cavallaro explored the factors of multilingualism in the article "Multilingualism in Southeast Asia: The Post-Colonial Language Stories of Hong Kong, Malaysia and Singapore". A team of authors Lennart Bartelheimer, Britta Hufeisen and Simona Montanari explore European multilingualism in the article "Multilingualism in Europe". Multilingualism in North America explores the characteristics of multilingualism in

North America and is written by Wayne E. Wright and Virak Chan.

The second part is called "Language Use in Multilingual Communities". The second part also consists of four publications by different authors. Accordingly, a multilingual environment conducive to language learning will be beneficial not only for children from multilingual families, but also for a monolingual population. Cognitive benefits do not depend on the acquisition of high proficiency, let alone excellence in the languages being studied. The emphasis on language proficiency should not lead to neglect of other important aspects of language acquisition, including its cognitive effects. The holistic principle allows us to consider the multilingual system of the individual as a kind of holistic formation.

The work "Diglossia in Multilingual Communities" is created by John Maher about problems of diglossia. Codeswitching is explored in the article "Codeswitching in Multilingual Communities" by Anat Stavans and Ronit Porat. Charlotte Gooskens explores aspects of "Receptive Multilingualism" in so-called article. The team of authors Deborah Chen Pichler, Wanette Reynolds and Jeffrey Levi Palmer addresses the issue in the article "Multilingualism in Signing Communities".

The third part "Individual Multilingualism: From Development to Loss" reflects the problematics of individualistic multilingualism. The efforts made by an individual to maintain a certain level of language proficiency increase in direct proportion to the development of this linguistic system.

The benefits of multilingualism described above are not limited to the "ideal" multilingual language learned in early childhood. The definition of multilingualism isn't based on early learning and proficiency in the languages studied, but on the ability to communicate in them.

Four publications are devoted to this topic. Suzanne Quay and Sarah Chevalier explore the complexities of teaching different languages to children in their article "Fostering Multilingualism in

Childhood". Elizabeth Lanza and Kristin Vold Alexander address the topic of family in their article "Family Language Practices in Multilingual Transcultural Families". Xiao-lei Wang explores the school years of children faced with learning multiple languages in *Multilingualism through Schooling*. Ulrike Jessner and Manon Megens wrote an article "Language Attrition in Multilinguals" exploring the linguistic characteristics of the study.

The fourth part touches upon various aspects of multilingualism and bilingualism "Differences between Bilingualism and Multilingualism". Although the terms "bilingualism" and "multilingualism" are still frequently used, the term "plurilingualism" is increasingly being used. This approach to teaching foreign languages often overlaps with multilingualism.

Four publications relate to the topic. *Facilitated Language Learning in Multilinguals* by Simona Montanari, Elisabeth Allgäuer-Hackl and Ulrike Jessner explore the problem of interaction with other branches of science and to broader views of language in the article "Cross-linguistic Interaction and Multilingual Awareness". The publication "Multilingualism and Cognitive Benefits in Aging" reflects contemporary issues of the cognitive aspects of multilingualism, compiled by the team of authors Dorit Segal, Gitit Kavé, Mira Goral and Tamar H. Gollan. Iris M. Strangmann, Stanley Chen and Loraine K. Obler wrote "Multilingual Language Processing and the Multilingual Brain", exploring cognitive and mental characteristics.

The final article belongs to the authors of the book Simona Montanari and Suzanne Quay. The research carried out at a deep level touches upon complex issues related to science, multilingualism, which is also important in modern society.

The reasoning given in the book follows the format of popular science literature. The authors provide a detailed scientific review dedicated to the research topic.

The theoretical material used in the book justifies its purposefulness. The results obtained are accept-

able for publicity. The reasoning behind the conclusions characterizes the high level of preparation of the authors. The book's conclusion is backed up by proven examples. The writers' reasoning is logical and correct. Assumptions and illogical conclusions are not observed in the work, despite the presentation of a rather complex and controversial topic.

The research carried out in the book is limited to the information used by the author of the research. Simona Montanari and Suzanne Quay are also recommended to use the works of modern Russian scientists who studied the period of the Cold War. However, Simona Montanari and Suzanne Quay wanted their research to be unbiased, so they only used formal research. The selected book has a target audience mainly for those who are engaged in research in this area (linguistics, speech therapy). The book is written in a scientific and journalistic writing style.

The ability to socialize in another culture no longer occupies a leading position, in its place is the gradual development of a set of competencies associated with adequate and productive coordination and use of several linguistic and cultural systems in order not only not to violate the principles of multicultural interaction, but also to preserve their identity regardless of the communication situation. A person who studies two or more languages, who is interested in several cultures, does not keep them in his mind separately from each other, but forms, on the basis of all the knowledge, skills and abilities he has acquired, a single communicative competence that summarizes all the cultural and linguistic experience that he owns.

Late XX – early XXI century is characterized by intensive processes of globalization associated with mass migration of the population. An important component of these processes is active linguistic contacts between ethnic groups, which leads to a large-scale spread of multilingualism and its varieties (bilingualism) on the territory of our planet. The book examines various forms of the existence of mul-

tilingualism, discusses the problems associated with various scientific ideas about multilingualism, the multilingual individual and its main characteristics, and also substantiates the need for an interdisciplinary approach to the study of this phenomenon.

The current presentation of multilingualism as a complex socio-psycho-linguistic phenomenon requires the development of qualitatively new ap-

proaches to this problem. First of all, it's necessary to use an interdisciplinary approach that takes into account the results of research in the field of various scientific disciplines: linguistics, psycholinguistics, sociolinguistics, sociology, biology, and even physics. So, each of which can make a significant contribution to the creation of a unified synergistic theory of multilingualism.

### **References:**

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