European Journal of Humanities and Social Sciences

2024, No 5

European Journal of Humanities and Social Sciences is an international, English language, peer-reviewed journal. The journal is published in electronic form.

The decisive criterion for accepting a manuscript for publication is scientific quality. All research articles published in this journal have undergone a rigorous peer review. Based on initial screening by the editors, each paper is anonymized and reviewed by at least two anonymous referees. Recommending the articles for publishing, the reviewers confirm that in their opinion the submitted article contains important or new scientific results.

Premier Publishing s.r.o. is not responsible for the stylistic content of the article. The responsibility for the stylistic content lies on an author of an article.

Instructions for authors

Full instructions for manuscript preparation and submission can be found through the Premier Publishing s.r.o. home page at: http://ppublishing.org.

Material disclaimer

The opinions expressed in the conference proceedings do not necessarily reflect those of the Premier Publishing s.r.o., the editor, the editorial board, or the organization to which the authors are affiliated.

Premier Publishing s.r.o. is not responsible for the stylistic content of the article. The responsibility for the stylistic content lies on an author of an article.

Included to the open access repositories:

The jurnal has Index Copernicus Value (ICV) 85.11 for 2022.

Section 1. Economics

TO WHAT EXTENT DID THE PROSPEROUS ECONOMY IN THE EARLY BREZHNEV PERIOD TURN INTO A CATASTROPHE IN THE LAST YEARS OF GORBACHEV'S RULING?

Artem Reyson [1]

[1] Clifton College

Abstract

In this project I will analyse the factors which determined the extent the Soviet economy was in by the end of the Gorbachev era and the collapse of the Soviet Union in 1991.Many people in former USSR states, have blamed Gorbachev for the break of the Soviet Union and for the sharp economic downturn. To assess exactly how true this statement is, it is important to look at the state of the economy during his time, as well as looking at the USSR at the time of its best, which was the prosperous period of the late 60s and the early 70s. To do this effectively, I will look at, and analyse different areas of the economy such as agriculture, military and the social sector in the different periods of time, which will be the yearly Brezhnev period, the stagnation period and the Gorbachev era. I will also evaluate whether it was purely economic decisions which affected the state of the economy or whether some other things such as the characters of the leaders or political policies also had an effect on the economy. In comparing the difference between the successful economic growth of the early Brezhnev period of 1964–1973 and the decline of the Soviet economy in the late 1980s, as well as looking what has happened to the economy along the way and what contributed to its eventual decline, I can assess exactly how bad the economy was doing in the last years of the USSR and conclude whether, and if it did, then to what extent, the economy turn into a catastrophe.

Keywords: *policy, economy, Soviet Union, Gorbachev, Brezhnev, reforms*

Introduction

The question poses some challenges as the words 'prosperous' and 'catastrophe' are very different and can almost be counted as antonyms. The word 'prosperous' can bet defined as "having continuous success or good fortune" or "flourishing financially" (Oxford English Dictionary, "prosperous"), while the word catastrophe can be defined as "an event causing great and usually sudden damage or suffering" or a "disaster" (Oxford English Dictionary, "catastrophe"). Assessing these

can be incredibly difficult as there are many factors contributing to both prosperity and catastrophe and there is no scale to determine to what extent something was prosperous or catastrophical. To determine whether the late 1980 s crisis was a sudden damage as defined by the Oxford Dictionary or if it was a decline that started much earlier, one can fairly successfully estimate the extent of the economic disaster by examining how much the economy has changed and how quickly the change has happened.

I chose this title because I found this question challenging on one side, but at the same time very interesting and engaging on the other, where there are a lot of different views on the topic, but there isn't a certain answer. In analysing this question I hope to provide more answers to this complex debate, which is still very relevant to the modern world today, especially to the people living in Eastern Europe and have to deal with the consequences of the 1990 s economic downside even today. I also chose this question due to my interest in economics, but more specifically the economics of the USSR, which is very different from the current modern economies in most of the countries. Most of the countries nowadays, including Russia and its former satellite states, have a mixed economy which can be described as "a market system of resource allocation, commerce and trade in which free market coexist with government intervention" (Britannica Money, 2024. "Mixed Economy"). In other words, supply and demand act as signals to the producers which would adjust things such as production and investment to them, until the equilibrium between supply and demand occurs and allocative efficiency is reached, while the government either minimally regulates the economy in the economies which are free-market economies, or plays a role of a corrector of market failures, when the market struggles and promotes social welfare to have a wealthy society. The economy of the USSR was cordially different from the above, as it was a planned economy. This economy involves a government making key decisions on the production and distribution of goods rather than letting market forces along with consumers and producers regulate the economy. This is primarily done to control soci-

ety's resources for a certain goal that might not be achieved by market forces alone (Investopedia, "Centrally Planned Economy" 2020). In case of Soviet Union, the goal was to move towards communism and the centrally planned economy was helping to regulate the movement towards it.

1. Success of the early Brezhnev period
Brezhnev Personality:

To better understand why the economy was doing good throughout the 1960 and into the early 1970 s, Brezhnev's character is something to look at, as it directly relates to the state of the economy during those times. Unlike Khrushchev, who was often impulsive, reckless and was primarily a man of action rather than a man of thought (CIA.gov, "Khrushchev- A personality sketch", p. 7), Brezhnev was much more conservative and preferred a much more cautious approach to governing. "To his Soviet audience, he personified the Soviet bureaucracy itself: serious minded, conservative and impersonal, rather than outspoken, bragging or coarse" (Bircher, R., 2015, p. 37). Brezhnev's preference for stability over radical reforms created an environment in which economic planners could cooperate with greater confidence. The reluctance to engage in any kind of radical reforms meant that more effective long term planning and resource allocation was now a possibility, which, however, didn't come without the bureaucracy which increasingly slowed the process down over the years eventually leading to stagnation.

To analyse exactly how bad the economy was doing in the last years of the USSR, it is important to understand how different sectors of the economy were doing at the time of prosperity in the USSR under Brezhnev, and to understand why it was a prosperous time.

Agriculture:

Soviet agriculture under Brezhnev is a debateful area of the economy as in the first few years it saw a big improvement, while in the later years of Brezhnev, it took a big hit of stagnating economy and became a burden to the economy and the Soviet life. According to Diamond Douglas and Lee Davis the agricultural output between 1953 and 1973

TO WHAT EXTENT DID THE PROSPEROUS ECONOMY IN THE EARLY BREZHNEV

showed a constant growth in the output, accompanied by a constant growth of inputs (Diamond Douglas B. and W. Lee Davis (1979), p. 19–55).

Table 1.

Soviet agricultural output, inputs and factor productivity (1950 = 100)			
Output	Inputs	TFP	Memorandum item: US farm TFP
106.8	105.7	101.0	105.3
159.2	130.0	122.5	121.3
164.7	141.9	116.6	127.9
230.5	169.6	135.9	143.3

This is true, as Brezhnev's leadership spent much more on the farm sector than his predecessor Khrushchev. While it can be said that the farm sector rose at the expense of the other sectors of the economy which also required funding, from Diamond and Davis's table it can be seen that if the year 1950 was taken as a base rate of 100, then by 1973 the agricultural output rose put to 230.5, which is more than by 100%, while inputs rose to 169.6 in those years, which is less than 70%. Therefore it can be said that there was a positive return on the investment made by the Soviet government. This suggests that the great priority was given to the agriculture sector, as it was one of the biggest industries in the Soviet Union and Brezhnev was keen to expand it, which was even successful in the first years of Brezhnev's leadership.

Furthermore, according to the professor of the Political Economy of Russia and Eastern Europe Philip Hanson, the shift in the investment priorities under Brezhnev was striking, as Brezhnev aimed to significantly improve the agricultural sector by raising the investment in agriculture by 62% between 1961–1965 and the Eighth Five Year Plan of 1966–1970, compared to the total investment in the whole economy which only rose by 43% (Philip Hanson. "The rise and fall of the Soviet economy". p. 113). This again, signifies the importance Brezhnev gave to the agricultural sector. Although, now has started to fail him in the second half of his leadership, as the output has started to decline before the input meaning that the Soviet investment in agriculture stopped paying off after the early 1970s. Despite Brezhnev's struggles to give massive amounts of invest-

ment into the agriculture, as the XXVI Party Congress in February 1981, Brezhnev once more talked about the importance of agriculture (Pravda, 24 February 1981, p. 6), there was a clear sign that the increasing investments into agriculture were having less effect as the production stalled or even worse, has dropped. This can be seen Hanson's table of Soviet output on selected farm products from 1977 to 1982, where every single product except sugar beet and eggs fell in output according to the official sources. The decline could have happened due to many reasons such as often occurring misallocation of resources due to corruption, technological deficits and too old machinery or due to labour issues. The visible decline of the agriculture sector started a long time before the economy completely broke down in the late 1980s, which means that there was no catastrophe in the agricultural sector of the economy, but rather a slow decline.

Infrastructure:

In the years of prosperity under Brezhnev, the Soviet lifestyle was where the real prosperity seemed to be, as a lot of Soviet people started to enjoy things never previously seen or could enjoy before. This was due to Brezhnev promoting his goal of stable society under which he expanded social security systems and maintained full employment, therefore making the majority of the population have job security and stable income, consequently resulting in higher social prosperity levels.

First of all, Soviet people could enjoy significantly higher wages. The main cause of this was Brezhnev's focus on living standards as he expanded social welfare pro-

grams and maintained the full employment policy, therefore providing job security and stable income for the majority of the population. During the two five year plans in the seventies the average wage of the Soviet person rose from 97 rubles per month to 177 rubles per month (History Lab "By the footsteps of the Soviet Atlantis". Lecture 22). This was more than 1.5 times of an increase, which was a significant factor of economic growth on its own, but what really highlighted this achievement is the fact that the prices did not rise over this period of time (History Lab "By the footsteps of the Soviet Atlantis". Lecture 22). Due to this, the purchasing power of a Soviet citizen rose, which contributed to the overall spending into the economy.

This went along well with the Kosygin reforms which allowed firms to decide how much to produce and how to sell it (History Lab "Leaders of Nations, Leonid Brezhnev"), which increased the production of goods by 1.5 times in the next 5 years. This was due to the firms shifting from trying to meet the target output set by the government to profit maximising, which meant more efficiency and incentive to work as firms now had some personal interest involved. The result of the reform was positive. For example, every year 1000000 cars were produced, which meant that the Soviet people could buy a car, without any shortage problems, and the constant rise in wages meant that the people were able to afford those cars without much of a financial struggle. This acts as a signifi-

cant factor when assessing the prosperity of the first 10 years of Brezhnev's leadership, as production and spending rose, without any significant inflation, which suggested economic growth.

Additionally, the housing construction also saw a big increase (History lab "By the footsteps of the Soviet Atlantis". Lecture 22). Throughout the seventies, the same amount of housing was built, as there already was by the end of the sixties, and again, due to the strong financial situation, the Soviet citizens, didn't have much struggle in paying utility costs and rent as on average it only accounted for 2.6% of the family budget (History Lab "By the footsteps of the Soviet Atlantis". Lecture 22). Furthemore, the amount of new technology in those households rose, as well. When compared to the late sixties, by 1982, the amount of TV's, fridges and washing machines rose by 1038% 2125% 1650% respectively. This had big consequences. As people's living standards started to get better and confidence rose, people started to live higher quality lives which was reflected in the average life expectancy.

Higher wages, along with increased production and technological progress marked the prosperity of the late 60s and the early 70s, as people's lives started to become better. The extensive production and construction wasn't the only marker of prosperity during those times. One of the biggest factors of economic growth is the life expectancy going up, as it is an indicator of health standards in the country increasing.

Table 2. *Average Life Expectancy at Birth in the Soviet Union (in years)*

Year	Total Population	Men	Women
1938–39	46.9	44.0	49.7
1955–56	67	63	69
1958–59	68.9	64.4	71.7
1971–72	69.5	64.5	73.6
1978–79	67.9	62.5	72.6
1983–84	67.9	62.6	72.8
1984	67.7	62.4	72.6
1985	68.4	63.3	72.9
1986	69.6	65.0	73.6

Source: Ryan, 1513

As Ryan suggests, the life expectancy in the Soviet Union rose from 46.9 years in 1938–1939 to 69.5 years at the peak of Soviet prosperity in 1971–72 (Ryan 1513).

Much of this was due to the Soviet people getting more opportunity for rest, with the number of health resorts increasing significantly from around 3000 in the seventies to 13.5 thousand by 1980 (History Lab "By the footsteps of the Soviet Atlantis". Lecture 22). Around 59 million people enjoyed the services of these health resorts. Well rested and healthier workers, were able to come back to their workspaces in a better mood with higher efficiency and contribute better to the main goal of increasing the output.

Finally, education became an important factor in the Soviet lifestyle, as the number of schools and nurseries actively grew. USSR was considered the most reading country in the world, as on average, a Soviet person was reading 56 minutes per day, which when compared to 10 minutes of reading in the USA looked significantly more (History Lab "By the footsteps of the Soviet Atlantis". Lecture 22). An increasingly stronger education system allowed more and more people to gain access to higher education, meaning more skilled workers in the long run.

So, the prosperity was seen in many sectors of Soviet lifestyle, as almost every social factor was growing in those years. However, it is important to understand that the prosperity didn't get replaced with a catastrophic state straight away, but rather the economy soon entered a period of long decline, known as stagnation, which the USSR has never recovered from. It is important to understand this period of "stagnation" as it helps to understand exactly in what state Gorbachev has inherited the economy, and compare the difference between the stagnating economy of the early 1980 to the economy of the last years of the USSR to determine to what extent the prosperity turn into a catastrophe.

2. Stagnation Period

The term "stagnation" was first used by Michael Gorbachev, as he defined it as an economic slowdown with few new policies and a lack of development (Study.com, "Era of Stagnation in the Soviet Union | Reasons, History & Impact"). This is important to note, as this term was not widely used in the Brezhnev years, with the government referring to it as "period of developed socialism", which according to Rumyantsev was a period of "advanced, dynamic maturity of socialism as an integral social system, the complete realisation of its objective laws and advantages, and its progress towards the higher phase of communism". As a deputy of the supreme Soviet of the Soviet Union, it was in Rumyantsev's interest to promote this kind of definition, rather than referring to this period in the terms such as Gorbachev used, and therefore might be considered unreliable. However, it does hint that the stagnation period might not have been as bad as Gorbachev was trying to portray, and in fact the real Soviet decline only happened under Gorbachev. To come up with a conclusion, several sectors during the era of stagnation have to be looked at and compared to those in the last years of Gorbachev ruling later on in the essay.

Reasons for stagnation:

One of the primary reasons for the start of stagnation was Brezhnev's deteriorating health in the second half of the 70 s. In the late 1970, Brezhnev suffered a series of strokes, which led him to be increasingly weak every following year as he became more and more dependent on sedatives and sleeping pills (The Washington Post, Perspective by John Neumeyer, "The political history of concealing illness, from Brezhnev to Trump"). After suffering a stroke in 1975, Brezhnev's ability to lead the country became much worse as he acquired stumbled speech and confusion, which only worsened as years passed by. As his mind started to fail him, so did the economy. This was because with Brezhnev's ill health everything slowed down as many decisions took a long time to be made as nearly everything had to come through Brezhnev, who was unable to think quickly anymore.

Brezhnev was appointed as a general secretary, primarily to produce stability in the economy, which he could provide in good health and clear mind, however as he became increasingly ill and slow in his decision making as all his time and effort went to simply looking good in front of a camera the economy started to slow down. Secondly,

many other Politburo members also became increasingly old. The gerontocracy of Politburo, which in other words means that the country is led by a group of elderly people, was one of the primary reasons for the economic decline and was often associated with stagnation, as the elder government was far away from knowing how to run a modern economy, being too conservative with their outdated policies which resulted in economic mismanagement, and therefore stagnation.

When Politburo was first created, none of the members were above 40 years of age, except Lenin, who was 47, however by 1974 the average age of Politburo members reached 65 years old (Soviet Studies, "A note on the ageing of Politburo"). This negative trend can explain the reason for the economic slowdown, as most of the leading positions were just simply too old to implement new policies as they feared for their positions they have been in for so long.

Analysis of Alex Kosygin speech on the 1976 Party Congress:

Despite the stagnating economy, on March 3, 1976 the 25 Congress of the Communist Party resolved to approve the Guidelines for the Development of the National Economy of the USSR for 1976–1980 (Documents and Resolutions of the XXVth Congress of the CPSU, Moscow 1976, p. 172). The principal objective of the guideline was " the consistent application of the Communist Party's line of raising the standard of living of the people both materially and culturally through a dynamic and well balanced development of social production and its increased efficiency, faster scientific and technological progress, higher labour productivity and better quality of work throughout the national economy" (Documents and Resolutions of the XXVth Congress of the CPSU, Moscow 1976, p. 180). This was the opposite of stagnation, and in fact was meant to build on the success of the 9th five year plan. While, it may have been propaganda and acted as a cover up for some of the economic problems which were already happening by 1976, as nobody in the Congress liked to mention the problems, the data below would suggest that from 1964 to 1982, the economic growth was big, and noticeable in the daily lives of the Soviet people.

A Russian historian Yuri Yemelianov suggests that throughout the 70s there was an active development of the northern and eastern regions of the country, as oil production in Siberia increased by 10 times, gas production increased by 15 times, along with chemical and electricity production which both increased by two times (History lab " By the footsteps of the Soviet Atlantis", Lecture 220. Along with that, many new hydroelectric power stations were built such as Ust Ilimsk, Sayano-Shushenskaya, Nizhnekamsk, Dniester and several more. All of these are a sign that despite the wide belief that economic growth was slowing down from the 60s, new infrastructure was being developed and the country's output was growing, suggesting economic growth, so much so, that by 1982, the Soviet Union accounted for ⅕ of the world's total industrial output. Furthermore, in those 9 years the USSR managed to become the top producer and extractor of oil, coal, steel, diesel locomotives, electric locomotives, combine harvesters, tractors, wood and mineral fertilisers per capita (History lab "By the footsteps of the Soviet Atlantis". Lecture 22). The oil production, can be used as a good example to illustrate the condition of the economy as the USSR was a closed economy, it had to rely on its own production of oil, which was one of the biggest areas in the economy, if the oil production rose, it meant that the economy was doing good as the oil production provided many jobs, and the oil itself was cheap, which meant more Soviet citizens could afford buying it. Some of the oil could also be exported to satellite states and some other friend countries, which raised additional revenue for the government increasing its budget. Despite not meeting several of their overly five year targets by the late 1970s the USSR reached its peak in oil extraction coming in at around 225 million tons ("The formation and evolution of the Soviet Union's oil and gas Dependence", Sergei Ermolaev). This shows that the economy wasn't all black or white and while some of the areas might have been stagnating, the others were on the rise, bringing massive revenues to the government, suggesting that what could be seen stagnant on the surface, actually was quite progressive and developing meaning that the stagnation period wasn't just a constant decline in all sectors of the economy. So despite some negative effects of economic

stagnation this era is still considered one of the most prosperous in Soviet history, with standards of living getting improved and enhanced social services such as healthcare and education, meaning that there was no visible decline during this period. This in turn means that Gorbachev has inherited a reasonably well working economy, not without any flaws, however with many key industries working well and an idea in people's mind which everyone has worked for, meaning that the country was not at a point of no return, and could be recovered with the right set of policies.

3. Gorbachev era
Gorbachev's policies:

After looking at the periods of prosperity and stagnation, it is now time to look at the final period of Gorbachev's ruling and the state of the economy under him, to come to a conclusion of how sharp the decline has been and whether or not the economical crisis has been that big.

To start off with, it is key to note, as it was discussed before, that the economy has already been in decline for several years before Gorbachev came to power. Many people in the USSR had to admit that although the Brezhnev years were prosperous, the economy has been in decline which is important to note while assessing the economy under Gorbachev. Many people who liked Brezhnev as a leader started to say " Now that Brezhnev has died, it is time for a change" (History lab "Leaders of Nations, Leonid Brezhnev"). Despite that, the changes which came, never became successful and eventually resulted in the fall of the USSR.

Much of Gorbachev's leadership was driven by his character. Michael Gorbachev was known to have big ambitions and was seen as a breath of fresh air in the Soviet system. However, more importantly, he was different from any other leader before him in the way that he portrayed himself to the people. As a historian, Yuri Emelianov, suggests, Gorbachev spoke to the people about the day to day problems in an informal way, and was open to them, in a way no other leader was before. This was then portrayed in his "glasnost" politics, which meant openness or full transparency in every aspect of Soviet life (Britannica, 2024). Gorbachev's open charac-

ter contradicted the economical system of the USSR in every possible way, as Gorbachev's reforms were on the opposite ideological side of the planned and command economy of the USSR, where everything was strict. Altering the system carried a risk of a potential breakdown of the whole economy, which has eventually happened, as Gorbachev's attempt to introduce a market economy and restructure the economy failed for various reasons.

The most notable policy which Gorbachev has used was "perestroika", which meant restructuring and was aimed to address the stagnation which has become a burden for the Soviet people by that stage. This was because the military spendings and constant development of new nuclear warheads took all the needed capital away from other industries meaning that they became stagnant, not being able to produce any more output, not increasing the GDP, while still requiring maintenance, eventually becoming burden. Although on paper the idea of perestroika worked well, as introducing changes to the economy which were supposed to bring the Soviet Union out of the stagnation period, in reality perestroika was the opposite, where change meant lost control, which lead to chaos in the economy as the economy was not ready for them. In Philip Hanson's book "The Rise and Fall of Soviet Economy", he refers to perestroika as "Catastroika" in one of his chapters, hinting that it was a catastrophe. As a professor, Philip Hanson has deep knowledge and understanding of how the politics and the economy worked at that time, and therefore his views can be valuable in assessing perestroika. If Philip refers to it as a catastrophe, there must be some evident reasons for that, and here are some of them.

One of the most evident examples of perestroika not working was the alcohol campaign which Gorbachev tried to implement, as part of his new thinking and restructuring campaign. On May 161985, the Presidium of the Supreme Soviet of the USSR issued a decree which was aimed to fight alcoholism and drunkenness. Sales of alcohol were strictly restricted from 14:00 to 19:00, and alcoholism at work was strictly prohibited (History lab "By the footsteps of the Soviet Atlantis". Lecture 26). From the first sight, it might appear that this policy would bring more efficiency

into the economy as people, would take less days off work, and would perform better with a sharper mind, which would increase the quality of the labour force accounting for economic growth. However, in reality, the effect of this was so small, that it did not affect the economic performance at all, as people were simply not motivated to work harder, and the amounts of alcohol consumed, did not affect their overall performance, and even if it did, this was not a sufficient amount to affect the trend rate of growth. Moreover, the popularity of this campaign was debateful. While some people liked it, many people found it irritating, which raised some questions in the public about the government's actions. This shows that the alcohol campaign was a failure, which was one of the early examples that Gorbachev's view of rebooting the economy was not working.

Along the history of the USSR, people have worked for the idea of building communism and put their trust in the government, which was key for economic expansion. As can be seen from the example of the alcohol campaign, people started to trust less in their government, which started to bring economic problems as the mechanism which was built on these people began to crumble.

Another big implementation of perestroika into the Soviet economy was the introduction of cooperatives, which were privately owned businesses. The Law of Cooperatives was issued on May 261988, and allowed freedom for the privately owned enterprises to be self-funded, managed and profit-ordinated (Seventeen moments in Soviet History "Cooperatives"). Again, this policy looked great on paper, and to a certain degree, it even worked as these firms were aiming to maximise their profits, and therefore they were much more efficient than those of the state. However, the cooperatives went against the Soviet way of managing the economy, which meant that the two sectors were restricting each other's growth. For example, due to the nature of the economy where most of the firms were state owned, it was very difficult for the newly emerging private sector firms to obtain needed things, such as licences and permits, which slowed down their work and made them less efficient. Additionally, as the extract by Lewis Siegelbaum suggests (Seventeen moments in Soviet History "Cooperatives"), many of the

cooperatives were charged higher taxes and had to borrow at higher interest rates, due to the government trying to take as much advantage from them as possible. This significantly increased the cost of productions, which were in turn passed onto the consumers in the form of higher prices. Due to the economy of the Soviet Union becoming increasingly weaker, most of the people were unable to buy the goods at these high prices. This made the cooperatives only popular in bigger cities, where the wages were generally higher. Due to this, it could be said that the effects of the elements of the market economy were very concentrated around certain areas, and although the country became mostly urban under Brezhnev, around ⅓ of the people have still lived in rural areas, where the cooperatives couldn't be profitable. Therefore, the cooperatives, which symbolised the coming of the market economy, only had a limited, and very debateful effect on the whole economy, as it signalled the fact that the market economy wasn't working the way it should, while at the same time the structural economy which kept the Soviet Union going started to break up, due to the increased freedom of the firms, which were now less dependent on the government for uphold and were more profit driven.

Another big shake up to the system came from Gorbachev's vision on how things should be run. Gorbachev naturally liked people with good rhetoric skills, due to having good rhetoric skills himself, and therefore Gorbachev introduced an election based system where leaders of the enterprises were elected. Due to this, many skilled workers who have been in a certain industry for a long time and have been very experienced, which raised there efficiency and therefore output, have been replaced with workers who were less skilled, but had good rhetoric skills (History lab "By the footsteps of the Soviet Atlantis". Lecture 27). This started to take effect as the output in various industries began to fall. For example, industrial growth slowed significantly in the late 1980s, with the growth rate dropping from around 3% in the early 1980s to less than 1% by the late 1980s ("The Soviet Economy: Towards the Year 2000". Abram Bergson). The fact that Gorbachev was willing to sacrifice skilful workers with years of experience in order to promote good rhetoric skills meant that

TO WHAT EXTENT DID THE PROSPEROUS ECONOMY IN THE EARLY BREZHNEV

Gorbachev wanted a system where his policies of glasnost and perestroika would be above everything else – even the industrial output which other leaders cared so much about.

To put all Gorbachev's leadership together, the policies that Gorbachev tried to implement didn't work, and by the last few years of the Soviet Union, Gorbachev's policies led to a position of zugzwang, which in chess means that every next move you do will make your position worse. Likewise, Gorbachev tried to implement a market based economy into the USSR, which didn't do well in the severely structural economy where everything relied on a chain of command, where the government told the firm what to do, and the leaders of these enterprises would then carefully control what had to be done. When the it was clear that the market economy didn't solve the stagnation problems, but rather caused, bigger way more uncontrollable ones, it was already too late to return to the structural economy, as the government lost all of its power by that stage, and the policies making in the last few years of the Soviet Union, became chaotic, with multiple new policies conflicting with already existing ones, and on the local government level, various rules were formed which got in the way of market economy (The Rise and Fall of Soviet Economy, Philip Hanson).

In total, the economy was breaking down. Inflation, which was always controlled in the Soviet Union, and Brezhnev managed to maintain inflation close to 0%, due to the nature of the economy where prices were dictated by the government and were strictly controlled, was now on the steep rise, as the republics started to break away from the central government and implement their own fiscal policies and market economy letting many firms dictate their own price leading, agricultural and industrial output was on the decrease, food rationing became a common thing, wages became low and the jobs themselves were hard to find, the policies of perestroika and glasnost, which was the word for openness in the USSR, failed to work, and finally, unstable political leadership worsened it all off as everyone in the government was worried for themselves, and no longer cared about saving the economy.

Conclusion

In conclusion, after looking at the years of Brezhnev ruling and then looking at Gorbachev's years, it can be seen that the Brezhnev years were by many standards a golden timer for the economy and many Soviet citizens as they have found themselves living much better quality lives. When these years were later on compared to the ones of Gorbachev, by looking at the difference, it could be concluded that the economy turned into a disaster with the Soviet system breaking down and no other proper system coming in place leading to many people suffering. To answer the question of to what extent the situation was a catastrophe, it can be concluded that it was almost a total disaster. With the USSR not surviving the shocks and falling apart it can be further concluded that there was a total catastrophe on the economical, political and social level.

Source Evaluation

I picked my sources on the bases of how useful they would be for me, but also how reliable and how well they correspond with my question:

Source	Evaluation
Oxford English Dictionary	OED is widely regarded as one of the most authoritative sources on the English Language, as it is completed by a team of expert lexicographers and is continuously updated making it highly reliable and up to date source.
Britannica	Britannica is a highly trusted website which hosts many qualified experts in their respective skills to write posts about various subject matters, making it highly reliable.

TO WHAT EXTENT DID THE PROSPEROUS ECONOMY IN THE EARLY BREZHNEV

Source	Evaluation
Britannica money	Britannica money is a highly trusted website which covers a wide range of financial topics, which ensures its expertise in the economics field and constantly undergoes rigorous editorial process. Additionally, the article I have used was written by an "Associate Professor of Strategy and Ethics Management" in North Carolina State University and has made several contribution to Britannica making him highly trustable.
Investopedia	While Investopedia is a commercial website which generates revenue through affiliate marketing which may sometimes lead to focus on content that drives traffic, the website is still highly trustable among many professionals and students as it provides clear up to date and verified information. Additionally, the article I have used was reviewed by an active investor and technical analyst with 20+ years of experience and the article was fact checked by an editor whose speciality is financial planning, making the article highly creditable.
CIA	The source I have used from the CIA website has been confidential until it was approved for release in 2006, making the source seem highly trustable as it may have been used by the government to make important decisions on certain matters. Furthermore, the CIA World Factbook is widely used by academics and government officials proving its credibility.
Oxford AQA History	AQA history textbooks are considered very reliable secondary sources of information as they are used to teach students and are fact checked and approved by the AQA specialists who are considered to be professionals in their subject, making the source highly reliable.
Phillip Hanson	Phillip Hanson is Emeritus Professor of the Political Economy of Russia and Eastern Europe at The University of Birmingham, which makes him a professional and therefore credible. His experience and views were useful for me when I was completing my project.
History Lab	History lab is an education based history channel which hosts many professionals in their field, especially many well known and respected historians. The historian who lectures the videos, is a publisher of more than 500 publications about Soviet Union's politics and the economy. Although he is Russian and got his education there, which may affect his views in the lectures, as a professional historian he has given strong reasons for his sayings and views, which makes him reliable.
Ryan 1513 (BMJ)	The British medical journal where the article was published, is a publishing division of the British Medical Association and is one of the best journals known for its medical publishing, making it a very reliable source.
Study.com	The author of the post I was using holds a Master of Arts degree in World History from Northeastern University and also holds a B.A. in History and Political Science from the same university making him a professional, which means that his statements can be trusted.

Source	Evaluation
The Washington Post	The Washington Post is considered a highly trusted source, with only 13% of respondents not finding it credible in February 2022, additionally Joy Neumeyer is a historian of Russia and Eastern Europe, who is also a fellow at the Eastern University Institute, which highlights her expertise and credibility
Soviet Studies	Written by Rein Taagepera and Robert Dale Chapman, the document present some important information and statistics about the age of politburo members throughout the years, making it important for my research. All of the statistics have been clearly referenced making it reliable.
Documents and Resolutions	This is an official report of the 25th Congress of the CPSU. The document has been published by the Novosti Press Agency, which was one of the main publishing houses in the USSR. Since the document has been official and reflect directly on the resolutions of the 25th Congress, it can be said that this source it reliable and reflects accurate information of the event. However, since the report was likely affected by the Soviet government, some of the information could have not been publicly disclosed, and as a result the report may be lacking some important information.
Carnegie	This source is considered highly reliable among many academics and students, as it is known for its longevity having been founded in 1910, and for its expertise as it employs many scholars from around the world who are experts in their field and write accurate posts. Furthermore, the writer of the post I've been using is an associate professor at the Plekhanov Russian University of Economics, which is considered a very respectable university among many Russian people highlighting the credibility of the source.
The Soviet Economy towards the year 2000	Ambram Bergson, who is the author of this book, was an American economist and a professor at Harvard University. Making him very well qualified for my question. So I've decided to use it in order to gain the view of a professional economist specialising in the USSR as well as other areas of the economy.
Pravda	This was the most important Soviet newspaper with circulation of 11 million. All of the party members were obligated to read Pravda throughout Soviet history, which meant it had an incredible power in the USSR. Therefore, it is safe to think that the Soviet government could use Pravda to manipulate the people, which means that the information there might not have been accurate and reliable all the time. However, it serves a purpose of providing a deeper insight of how people lived and what people believed in at the time.
Seventeen moments in Soviet History	The website was developed by James von Geldern and Lewis Siegelbaum who are both professors of their respective universities one being Macalester College, and the other Michigan State University. This makes the facts from the website coming from experts and the fact that it was funded by the National Endowment for the Humanities meant that the topics presented were well researched providing valuable information, hence I decided to use it.

References

Bergson, A., & Levine, H. S. (2023). The Soviet Economy. Taylor & Francis.

Bircher, R. (2015). Oxford AQA History: A Level and AS Component 2: The Crisis of Communism: The USSR and the Soviet Empire 1953–2000. Oxford University Press – Children.

Era of Stagnation in the Soviet Union | Reasons, History & Impact | Study.com. (2023). Study.com. https://study.com/academy/lesson/era-of-stagnation-in-russia-causes-effects.html#:~:text=Leonid%20Brezhnev%20died%20in%201982

Khrushchev, A. Personality Sketch | Cia Foia (foia.cia.gov). (n.d.). Www.cia.gov. https://www.cia.gov/readingroom/document/cia-rdp79s00427a000100020010–6

Diamond Douglas, B., & Lee Davis, W. (1979). 'Comparative growth in output and productivity in US and USSR agriculture, in JEC (Vol. 2, – P. 19–55).

Congress of the CPSU. (1976). URL: https://www.marxists.org/history/ussr/government/party-congress/25th/25thcongresscpsu.pdf

Sergei Ermolaev. (2017, March 29). The Formation and Evolution of the Soviet Union's Oil and Gas Dependence. Carnegie Endowment for International Peace. URL: https://carnegieendowment.org/2017/03/29/formation-and-evolution-of-soviet-union-s-oil-and-gas-dependence-pub-68443

Hanson, P. (2014). The Rise and Fall of the Soviet Economy (p. 113) – Routledge.

Scott, G. (2020, January 29). Centrally Planned Economy. Investopedia. URL: https://www.investopedia.com/terms/c/centrally-planned-economy.asp

Perspective | The political history of concealing illness, from Brezhnev to Trump. (n.d.). Washington Post. URL: https://www.washingtonpost.com/outlook/2020/10/09/political-history-concealing-illness-brezhnev-trump/

Oxford Languages. (2024). Oxford Languages. Oxford Languages; Oxford University Press. URL: https://languages.oup.com/google-dictionary-en

Ryan, M. (1988). Life expectancy and mortality data from the Soviet Union. *British Medical Journal (Clinical Research Ed.),– 296*(6635),– P. 1513–1515.

Cooperatives. (2015, June 22). Seventeen Moments in Soviet History. URL: https://soviethistory.msu.edu/1985–2/cooperatives

Taagepera, R., & Chapman, R. D. (1977). A Note on the Ageing of the Politburo. Soviet Studies,– 29(2),– P. 296–305. URL: https://www.jstor.org/stable/150758

McCauley, M., & Lieven, D. (2019). Russia – The Gorbachev era: perestroika and glasnost | Britannica. In Encyclopædia Britannica. URL: https://www.britannica.com/place/Russia/The-Gorbachev-era-perestroika-and-glasnost

Lab, H. (2023, June 8). In the footsteps of Soviet Atlantis with Yuri Yemelyanov. Lecture 22. The Rise of the Brezhnev era | History Lab. YouTube. URL: https://youtu.be/HbS6hww-G0kk?si=Q3Sizxg_fwi4ErRD

Young, G. (2024, January 18). Britannica Money. Www.britannica.com. URL: https://www.britannica.com/money/mixed-economy

Lab, H. (2021, December 18). The leaders of the nations. Leonid Brezhnev. The documentary (2021) | History Lab. YouTube. URL: https://youtu.be/pl1GP6xLiBg?si=0IvmcuCg-ByMTU4U5

© Reyson A.
Contact: artemreyson006@gmail.com

Section 2. History

A HISTORIC AND AESTHETIC ANALYSIS OF GREEK "DARK AGE" GEOMETRIC POTTERY AND CHINESE RITUAL BRONZES

Jingwen Zhang [1]

[1] Basis International School Guangzhou, Guangzhou, China

Abstract

This study undertakes a comparative analysis of sampled Greek geometric pottery and Eastern Zhou bronze vessels, highlighting aesthetic parallels despite the civilizations' geographical and cultural separation. Through a comparative material and aesthetic analysis grounded in an investigation of their isolated cultural and socio-economic contexts, the paper reveals how each tradition reflects the unique developments of the disparate societies which produced these items. Despite a lack of direct interaction and the historical challenge of Eurocentrism in scholarship, this analysis bridges a gap in comparative studies, highlighting the intricate ways in which shifts in power, social hierarchy, and economic strategies are mirrored in ancient artistry. The investigation, enriched by a review of archaeological and art historical scholarship, sheds light on the profound, yet distinct, impacts of each civilization's milieu on their artistic expressions. This comparative approach not only bridges historiographical divides but also invites a re-evaluation of ancient artistic narratives, suggesting new approaches and methodologies to the study of ancient aesthetics and culture.

Keywords: *Greek Geometric Pottery, Eastern Zhou, Bronze Vessels, Ancient Greece, Ancient China, Aesthetics, Art History, Comparative Art History*

Introduction

Ancient Greece, comprising a variety of cultures across the Aegean over an extended chronology, is known for its material pottery culture, a medium which was developed over several centuries, the output of which survives in numerous artefacts and fragments today. Within roughly the same period of time, though geographically separated, China's historic bronze vessels were being developed in similar fashion. Their cultural significance can be traced from the Xia period to the Shang and the Zhou dynasty, surviving even in the Eastern Zhou domain when central political power was weakened.

Despite their importance in global human history, there remains a relative dearth in comparative studies of these two societies and their material culture. This is likely due to a combination of factors: the lack of direct interaction between the two cultures in this time period makes comparative analysis more difficult than a comparison of, for example, Greece and Rome. Another factor is that the prevalent eurocentrism in the study of art history and archeology in the 18th, 19th, and 20th centuries prevented the integration of the study of Chinese artifacts to mainstream European academic discourse. The case-study presented here, focusing on Greek geometric pottery styles and Eastern Zhou bronzes, seeks to address this in part.

In this paper, the author attempts to compare the two styles to contrast and analyze the respective socio-cultural structures and their effects on aesthetic production. Noting the apparent aesthetic similarity between the two artistic traditions, at first, the author envisioned utilizing the theory of structuralism to draw conclusions about the shared aesthetic preferences and artistic developments across cultures. However, as the specifics of artistic development in both cultures were further investigated, it soon became apparent that due to the complex variety of factors influencing aesthetic production, it is near impossible to argue for a unifying trend human aesthetic preference or development. Rather, the paper seeks to use comparison as a methodology to analyze the socio-cultural milieu which engendered the items, and to subsequently highlight the effect of various economic, social, and political changes on aesthetic production in two disparate cultures.

The structure of this paper is as follows: First, the author outlines the social, political, and economic contexts that produced the artistic tradition of Chinese ritual bronzes and the Greek Geometric pottery, noting the stylistic changes that correspond to contextual alterations, followed by a detailed comparison of the relationship between stylistic developments and context. Finally, a comparison of two vessels from the respective traditions is conducted, one from Late Geometric Greece and one from Eastern Zhou. The similarities and differences both visually and contextually are investigated as embodied in surviving artifacts.

Literature Review

This paper draws on a variety of sources from disciplines including history, archaeology, and aesthetics. Studies in the art of Greek Geometric pottery and Chinese ritual bronzes fall primarily into the field of archeology; given the dates of much of the significant excavations, this is another contributing factor to the dearth of comparative scholarship. Most of such sources referenced in this paper are dated to the 20th century, aligning with periods of time where archeological findings triggered an explosion of academic scholarship on these two topics.

The paper also utilises a variety of sources concerned with the surrounding historic cultures, including analysis of ancient oral traditions such as Homer, as well as archeological research on Greek and Chinese excavation sites. In addition, the author conducts a detailed visual analysis of the Dipylon vase at the National Archaeological Museum, Athens and the Wine Container (hu) at the Metropolitan Museum of art as part of the comparison.

The most significant sources used in this paper are *Geometric Greece: 900–700 BC* by John Coldstream and *A General History of Chinese Art* by Chen Shouxiang. Both offer overviews of the artistic developments in Greek Geometric pottery and ritual bronze in China respectively, illuminating the artistic development of both material traditions. In addition, other scholars often mentioned are Sarah Allen and David S. Nivison, titans in ancient Chinese studies. The author is further indebted to Whitely for their discussion of the Greek Dark Ages, and Desborough for his on the Protogreometric period

Historical Context: China

The Bronze Age of the ancient Chinese culture spans approximately three periods – the Xia, the Shang, and the Zhou – with bronze being introduced approximately in 2000 BCE. Together, these 'mysterious' dynasties are best known for their bronze wares, which generated significant cultural influence, as bronze wares continued to dominate even after iron was introduced in the Spring and Autum Period. The Xia Shang Zhou dynasties are consid-

ered mysterious due to the legendary figures and stories about the era that complicate our perception of the period (Chen, 2022). While Yangshao Culture, Longshan Culture, and Liangzhu Culture marked the formal beginning of 'Chinese culture', the Three Dynasties laid the foundations for Chinese aesthetic production. In the traditional historical narrative, the Three Dynasties are considered as Xiaokang (Modest Prosperity), which underlines its transformation from the Datong (Great Unity), the period before which is characterized in the sources as one of perfect egalitarianism and shared ownership (ibid).

The Xia

The Xia, the first and most enigmatic dynasty, is commonly believed to be a myth constructed to serve the purpose of legitimizing the rule of the Shang and Zhou. This conception persists despite the excavations of Erlitou in Henan dated to be from the traditionally designated period of the Xia (2200––1760 BC). It is both the result of the scarcity of historical records that remain about the Xia and of the mythological and supernatural elements that are often intertwined in these accounts. Allen (1984), who shows considerable skepticism regarding sources with supernatural elements, argues that the Shang-era people created the idea of the Xia, which represented the darkness overcome by the all-powerful sun kings; whereas the Zhou rulers transformed the Xia into a dynasty to support their claim to the mandate of heaven. Some scholars have attempted to prove the that the Xia did, in fact, exist through accounts of the Bamboo Annals, a controversial source detailing early Chinese history. While there is continued debate on the validity of the modern version of Bamboo Annals (The Bamboo Annals are a controversial set of Chinese historical court records of the Xia, Shang, Zhou, and the following Qin and Wei dynasties. The original version was discovered in the tomb of a Wei ruler in 281 AD, but was damaged by the grave robbers that discovered it. The original bamboo annals had disappeared entirely in the Song dynasty. There are currently two versions to the Bamboo Annals, the guben, a reconstruction of parts of the document from Pre Song quotations, and the jinben, which is a post Song fabrication). Nivison (2018) argues

that the Bamboo Annals provide a credible and detailed overview over the monarchs of the Xia dynasty, showing us that the Xia were more than mythology to those concerned with producing records.

Due to the 'Doubt Antiquity' movement, scholars often refrain from defining Erlitou in conjunction with Xia dynasty mythical accounts (Otherwise known as the Yigu, the doubt antiquity movement in the early 20th century was triggered by the collapse of China's imperial system. Iconoclasts began to question China's past due to a lack of ancient texts (Johnson 2016)). But if we are to focus entirely on archeological analyses of cultures in the period of the Xia, excavations reveal Erlitou to be a state centralized and complex, though the level of centralization is debatable (Allan, 2007). For a Bronze Age culture from the second millennium BCE, Erlitou displays high levels of sophistication and centralization, similar to the Aegean cultures in Crete and Mycenae. The most significant discovery are the remains of a walled palace at the center, with a grid of wide roads surrounding it. The palace is built in the form of capitals in coming Chinese dynasties: rectangular, in a courtyard-style and oriented in the north-south axis. In addition to the palace, dwellings, bronze and turquoise workshops, pottery kilns, tombs, and bronze workshops have been uncovered (ibid). Erlitou also expanded through outposts, through which resources such as salt, copper, and precious stones were acquired. Such expansion is unprecedented for the time and region, illustrating the centralized nature of Erlitou culture (Liu, 2009).

Bronze manufacturing, characteristic to Erlitou culture, also contributed to ongoing political centralization to Erlitou culture, or early China during the Xia time span. The production of bronzes implies a certain degree of centralization: territorial expansion to acquire bronze alloys, and the process of mining, smelting, and casting, transporting raw materials requires some degree of centralized management(ibid). This socio-political landscape of China is crucial to understanding the art form of Bronze ritual vessels, its sophistication and its aesthetic development.

Although the Erlitou political influence is limited to the middle Yellow River region, it exerts some influence over surrounding

cultural centers, evidenced in the adoption of Erlitou bronze vessel styles in different areas in China(ibid). The painted pottery of Dadianzi culture, from the same period as Erlitou, is highly influenced by Erlitou styles of bronze plaques with turquoise inlay. Yet, it is also important to note the degree of influence is highly limited. Sanxingdui in southwest China developed its bronze tradition indigenously as Erlitou's contemporary (Barnes, 2015).

The Shang

While little is known about the Xia, there is far more information available regarding the Shang, in terms of both surviving archaeological and literary sources. The actual site of the legendary last capital of the Shang Dynasty, Yinxu, was discovered in the late twentieth century; the list of Shang kings has been confirmed and is no longer the subject of extended debate, unlike those of the Xia (Allan, 2007). The Erligang culture is the central culture associated with the early Shang, found in the sites of Zhengzhou and Yanshi in Central China. Archeologically, Erligang seems like more of a continuation of Erlitou, since no clear evidence of "rupture or material decline", or dramatic stylistic shift is identified, yet it is often identified as early Shang(ibid). Greater centralization and greater influence of the Shang is revealed by the spread of Shang bronze styles, as similar vessels have been uncovered in Anhui, Guangxi, or Guangdong. Allan suggests that the Shang stylistic influence derives from its wealth and domination. The wealthy acquired similar vessels and emulated the Shang practices and rituals as to signify elevated their status. The level of emulation varied depending on geographical location. Shang vessels styles often underwent localization like in Dayangzhou Xin'gan in Jiangxi Province. Cultures surrounding the Yangzi, for instance, persisted in their local traditions and preferred Shang styles, Zun and Lei. Similarly, in remote regions, Shang bronze vessels are used out of their original ceremonial context (ibid).

The Shang dynasty oversaw the further development of a slave owning society, as well as increasing social stratification, resulting from private ownership and inheritance. Struggle and tension between the classes, nobles, commoners, slaves, replaced supposed mutual love and harmony. The Shang capital,

Yinxu (Anyang), was the center of administration and religion. Sharp and permanent class divisions had the king, his family, princes, courtiers at the top, farmers, and craftsmen at the bottom. The upper classes received tribute both in grain and in precious objects, lived in large houses and were buried in pits filled with furnishing, slaves, chariots. The lower classes comprised of farmers and craftsmen, who produced bronze, lacquer, and wood works. They used pottery vessels instead of bronze vessels and lived in pit houses. The captives are the worst off, as they were coerced to aid in earthworks and were often sacrificed in temples or burials (Chang, 1977).

The Zhou

The Zhou dynasty is considered to be a continuum of the Shang. The pre-dynastic Zhou culture was highly influenced by Shang culture. Mustering strength as a political entity and rival of the Shang, the Zhou dynasty eventually overthrew the Shang (Barnes, 2015). It is this culture which produced the object and style in question.

The Zhou dynasty was established by King Wu in 11th century BCE, with its capital in Haojing (current day Xi'an, Shan'xi province) (Wang, 2019). Because the Zhou dynasty did not have clearly distinct religious and political practices of their own, they inherited Shang ritual and political practices, enabling them to further elaborate and extend inherited traditions (Aiguo et al., 1989). While the Shang dynasty distinguished class through the acquisition of bronze vessels, the Zhou developed a practice of inscriptions on bronze vessels to accommodate a more systematic network of political authority. Inscriptions on bronze vessels recorded mandates from the central power of the Zhou, which bestowed legitimate control to local authorities (Allan, 2007). Inscriptions recorded not just "grants of authority", but also appointments, wars, lawsuits, to be passed on to later generations. Furthermore, the hierarchical tripod lining system was developed, in which higher ranking noblemen were allowed more tripods and more meat (Wang, 2019).

In the Zhou dynasty, class distinctions increased in significance. The Shang was the first class-based society in Chinese history and was termed the slave society. However, in the Zhou dynasty a feudalist society began to

take hold, where royals, statesmen and noblemen were designated different areas to establish regional states via mandate, resulting in the expansive territory for the Zhou Dynasty (ibid). And like previous periods, increased social stratification was paralleled with the further development of the system of slavery. Though independent, regional states owed allegiance to the Zhou due to superior standing religiously and militarily (Feng, 2003). Greater centralization allowed for more organized production of handicrafts in state owned workshops, which manufactured items with advanced division of labor (Wang, 2019).

Though the Zhou dynasty was kept peaceful through the perfection of Shang practices, the Zhou weakened due to power struggles, riots, and outside forces. Eventually, the barbarian tribe Quanrong invaded the capital in 771 BC, officially ending the Western Zhou. The Zhou dynasty persisted in the form of Eastern Zhou, with King Ping relocating the capital to Luoyi (Luoyang, Henan Province) in 770 BC (ibid).

The Stylistic Development of Bronze Vessels

The three dynasties were similar in their emphasis on ritual activity and the involvement of bronze vessels in them. "Record on Example" in the Book of Rites summarizes the development between the above-mentioned periods as the following: The Xia period is characterized by "respecting fate", the Shang "respecting gods", and the Zhou "respecting rites", composed of rituals and music which they established based on Shang traditions (Chen, 2022). Thus, while the stylistic development of Chinese Bronze vessels in the three kingdoms period can be considered to be, overall, conservative, it does closely follow the developments of Chinese ritual culture.

One tradition that has been held consistent throughout the evolution of bronze vessels is that of high abstraction, achieved through the omission of details when representing concrete forms in favour of patterns. The tradition originates in prehistoric China where, rather than presenting people or animal life in a realistic manner, they are consistently altered and stylized, perhaps even rendered into symbols, as depicted upon pottery vessels. Thus, bronze vessels

inherited this practice of depiction, as well as the application of these patterns and motifs through integrating them along with complementing geometric patterns, as it is for primitive Chinese pottery vessels (Chen, 2022). Further stylistic changes in bronze vessels are generally related to the balance and harmonization of the different decorative elements to achieve different visual effects.

The changes in bronze vessel styles correlate with dynastic changes, and an overview will be given below. Bronze vessels produced within the realms of the Xia period are distinguished by their simplicity and rawness, due to lack of technological development. Shang dynasty bronzes are solemn and 'mysterious', as influenced by the culture's heavy ritualistic culture and beliefs in ghosts and spirits. This style persisted in the Western Zhou during peak of political centralization in the three dynasties. Shang and Western Zhou bronzes are both influenced by the belief sense of divine and royal power, and the vessels are meant to showcase that of its owner.

In the Late Western Zhou Dynasty to Early Spring and Autumn Period, bronze vessels turned towards a more ornamental style due to the fading out of strict ritualistic practices – part of the political centralization of the Zhou dynasty. Towards the Warring States period, bronze vessel styles moved toward greater brilliancy as bronze ware became increasingly dissociated from royal and ritual use and became more of a status symbol. This enhanced artistic freedom, encouraging the invention of new ornaments (ibid).

The section above serves to provide a concise but relevant overview of the key social, political, and technological developments necessary for contextualizing the bronze studied in this paper. The author proposes that the discursion is justified insofar as the dearth of similar comparative analyses within scholarship more generally has produced excellent scholars of Ancient China with limited knowledge of Ancient Greece, and vice-versa. This same justification is extended to the next overview, which treats the cultural history of the Greek Geometric style in similar vein.

Historical Context: Greece Minoan

Archeological study of the island of Crete reached a zenith in the twentieth century, decades after similar investigation of many other sites in Europe. The historical narrative of the Minoan civilization has been subsequently constructed through using information gleaned from excavation. Like in China, much of Minoan history is surrounded by myth, such as the stories of the Minotaur in the maze of Knossos, and Deadalus and Icarus's escape with wax binding feathered wings. In fact, in 1917, after excavations conducted by Evans in 1900, it was commonly speculated that the island of Crete was in fact the mythical city of Atlantis (Balch, 1917).

Archeological findings dated to between 3100 to 1900 B.C. reveal various small settlements and burials, which indicate trading networks with Egypt and the Near East, exchanging goods and items ranging from cloth, timber, foodstuff, olive oil, for copper, tin, gold, silver, and ivory (Lobell, 2015). After around 2000 B.C., Minoans developed a palatial system, where the appearance of palaces, or multistoried building complexes, such as the site of Knossos, associated by Evans to the mythical Minotaur, showcased the sophistication of Minoan civilization. These palaces were often equipped with elaborate staircases, sophisticated drainage and plumbing, and were decorated with brightly colored frescoes. Minoan civilization collapsed suddenly around 1450 B.C., indicated by the widespread destruction of palaces (ibid). It should be noted that while the use of the English "palace" reflects their size and scale relative to surrounding buildings, these complexes are described by historians as "autonomous entities used for communal rituals and ceremonies" rather than centers for centralized administration (ibid).

Unique Minoan culture is exemplified by their distinct writing system, Linear A, as well as in their pottery. Minoan pottery is generally decorated with various motives of great vitality: abstract curvilinear patterns and natural forms such as marine creatures, frogs, flowers, and leaves; organized in side-by-side units and spiral strips, later in radiating and revolving schemes (Higgins, 1981). Sadly, while many pottery fragments remain, Linear A is left undeciphered to us today and much of the civilization remains shrouded in mystery.

Minoan culture exerts a strong influence on its contemporaries and those that follow, including that of Mycenae, such that Cretan-inspired skills, techniques, styles, and symbols are often evident in the material culture of early Mycenae. Minoanization, or the process in which other Aegean civilizations adopt Minoan traits, is theorized to have been caused by either trade, where interaction breeds emulation, or import substitution, where deliberate imitation of Cretan pottery "substitutes" were created, depending on the specific civilization addressed (Broodbank, 2004). What is known, however, is the close relationship between Crete and Mycenae, evidenced by mostly pottery remains in sites such as Midea, of both Cretan imports and imitations of Cretan pottery (Demakopoulou, 2004).

Mycenae

By the Late Bronze Age, around 1600 to 1100 BC, mainland Greece was dotted by the city-states of Pylos, Tiryns, Midea, Orchomenos, Thebes, and Athens. However, the most significant site was none other than Mycenae, after which the culture of Late Bronze Age Greece was named after. Written texts in Linear B used in administration documents reveal uniformity and standardization, with standardized clay tablets, terminology, and systems of taxation and distribution. Politically, in Mycenean kingdoms the central palace, or palatial center, governed over the territory, which was divided into provinces, each with its administration center. Provinces were then divided into districts, *Damoi* in Greek, often headed by leaders, *Baselius* in Greek (Kelder, 2010). Mycenean kingdoms were also often recorded to have been in contact with other Mediterranean cultures. The Tanaju kingdom centered around Mycenae was recorded to have diplomatic contact with Amarna period Egypt, with whom the Myceneans exchanged diplomatic gifts and traded with. Such trade resulted in import of Mycenaean pottery, the presence of olives, and the possible depiction of Mycenaean warriors on a papyrus scrolls (ibid). Similarly, written records dating from 1400 to 1200 BC of Hittites in Anatolia reveal dislike and discontent directed at the Ahhiyawan kingdom from the Aegean, whom they

admit being a "Great Power", an independent state with sizable military and territory (ibid).

Mycenae held an impressive array of art forms, especially goldwork, made into funeral masks, and vessels. Mycenean art forms were originally influenced by Minoan imports; for instance, a gold cup that is said to be from Mycenae from the sixteenth century has no close equivalents in Mycenaean goldwork, but its shape is close to Minoan terracotta cups of the early fifteenth century BC (Hemingway, 2012).

To some extent, despite being a separate cultural entity, Mycenae was a continuum of Crete. Mycenean Linear B was used on the Greek mainland and Crete 50–150 years later than Linear A, and they are closely related, according to research by Dr. Ester Salgarella. Linear B utilizes the same graphic system, or script, as Linear A, though the language is different (Claus, 2023).

The Greek "Dark Ages"

While China enters the Zhou dynasty in first millennium BC, complex socio-political entities in the Mediterranean "collapse" into what is commonly referred to as the Dark Ages. The causes of the aforementioned collapse are debated, though one popular but not widely accepted theory is the Dorian invasion (Cook, 1962). The "Dark Ages" typically describes the Greece's transition from the late bronze age to the early Iron Age, roughly from 1200 BC to 770 BC, starting with the fall of Mycenae and ending with the rise of Greek city states (Lemos, 2023). The period receives its name from the perceived decline in the sophistication of culture: "depopulation and migration, poverty in material culture and living standards, a sharp decline of high art, the loss of writing, the demise of contacts within the Aegean, and relative isolation from the Mediterranean" (Kotsonas, 2016). Most significantly, the fall of Mycenean *polities,* or early government structures, was accompanied by the entire loss of Linear B writing of Mycenae, leaving a gap in historical records up to 700 BC, when literacy re-emerges with the adaption of the Phoenician alphabet (Stanislawski, 1973). Without historical records, the history in this period is clouded by mystery, another reason it is referred to the "Dark Ages", drawing the par-

allel with the medieval Dark ages (The cause to the collapse of Mycenae is often associated with the Dorian invasion, but evidence is flimsy. Debate about it is unproductive since Dorians was historically insignificant. See: THE DORIAN INVASION Author(s): R. M. COOK Source: Proceedings of the Cambridge Philological Society, 1962, NEW SERIES, No. 8 (188) (1962), pp. 16–22 Crisis in Context: The End of the Late Bronze Age in the Eastern Mediterranean Author(s): A. Bernard Knapp and Sturt W. Manning Source: American Journal of Archaeology, Vol. 120, No. 1 (January 2016), pp. 99–149 Published by: Archaeological Institute of America).

Though historically referred to as the Dark Ages due to a perceived lack of production and political organization, the early iron age was also a period of innovation which laid the foundation for the flowering of culture in the archaic and classical periods by establishing the "Mediterranean way of life" (Stanislawski, 1973, p. 399). This includes the invention of iron, the development of swift sailing ships (and the consequent introduction of piracy), and the development of aesthetic traditions on the Greek mainland as derived from Mycenaean (and thereby Minoan) culture. Piracy then began to dominate the lifestyle of the Mediterranean, as well as olive and wine consumption. Overpopulation induced colonization, often enforced by rich individuals who hoped for profit through commercial agriculture exemplified by the planting of produce. There was also continued commercial trade throughout the Mediterranean, which involved the exportation of Corithian pottery. Notably, eastern influences are evidenced in Greek adoption of lyric poetry, music, as well as the phalanx unit of soldiers in war, which de-emphasized Homeric heroism and increased the demand for iron (Stanislawski, 1973).

Due to the lack of documentation, the socio-political structure of Greece during the Early Iron Age can only be gleaned through speculation and reconstruction, based in part on the poetry. It is often believed that Homer's stories reflect proto-geometric and geometric Greece, or otherwise named the Early Iron Age, with its stories originating from Mycenean Greece and influenced by the "manners and morals as well as the institutions of the heroes from the tenth and ninth centuries" (Drews,

1983, p. 98). Such belief is also where most of the scholarly interest in the Greek Dark Ages lies. It is from such interest that our reconstructions of the culture of the Geometric period are derived. Based on such analyses, Geometric period Greece seems to be politically decentralized – small independent farming and pastoral villages dominated (Whitley, 1991). These societies, referred to as *polis*, are led by a *Basileis*. The specific meaning of *Basileis* has undergone debate. Before and after the Geometric age, the word *Basileis* has been used to refer to kings, or rather, exclusive hereditary leaders of the state, but in Homer's time its meaning is stretched to include noblemen too (Drews, 1983). It is theorized that Dark Age Greek society is dominated by *Basileis* who gained power through military or political prowess, attracting followers who are provided some sort of political centralization and economic assistance, creating brotherhoods, or *Phretre* (Dolan, 1985). *Basileis* can be displaced by rival *Basileis* who are more dangerous warriors or more charismatic politicians (ibid). However, in the passage of time, the expanding and contracting *phretre* stabilized along its borders, developing internal structures, religion, and hereditary membership. The theory is often referred to 'big-men' model, which succeeds in explaining the instability of Greek settlements such as the Lefkandi and Kavousi, especially in the early Dark Ages, in the 12th to 10th centuries BC, though the trend seems to linger in 8th century BC (Whitley, 1991). The model also helps explain why settlements such as the Kavousi, Vronda, and Lefkand are situated around one large house, as the house, according to this model, would be where *Basileis* attracts followers, in a personal level, in extravagant feasts (ibid). Yet, the 'big-men' model is in no sense the only model proposed nor the only model grounded in archeological evidence. It is likely that Dark Age Greece was more diverse in its social structure, in that social structure could vary by region (ibid). Another model, relevant to the present discussion, is that of the 'Nuristan', which is somewhat analogous to the situation in Athens. The Nuristan model, unlike the 'big-men' model, suggests stable settlements, which seems to be the case for Athens, evidenced by its stable cemetery, which is also all that remains of the settlements (ibid).

The Development of Geometric Pottery Styles

Having provided an overview of the socio-cultural development of Greece up until the relevant point in time, we can now align the development of pottery styles to their historic context.

Mycenean pottery owes much to Cretan influence in its early years, though after the fall of Minoan palatial structures and the rise of Mycenean ones in 1400–1200 B.C., Mycenean pottery developed its regional and distinctive styles. (Hemingway, 2012) (This source from the MET comprehensively explores the art of Aegean civilizations from Minoan, Mycenae, Cyclades, etc.) In the Dark Ages, a new style of pottery, succeeding Cretan and Mycenean styles, was developed in Attica, around Athens – the Protogeometric.

Protogeometric pottery, unearthed in Athenian sites such as Kerameikos and the Agora, is distinguished by its highly geometric, simple, harmonic style. With the appearance of the Protogeometric comes the resurgence of exemplar production: clay is better prepared and baked, the paint is better burnished and lustrous, and pottery shapes are firmer, more proportioned, and symmetric. The style showcases a continuum of traditional pottery shapes, though the style of ornamentation seems to diverge from previous ones. In the later stages, the dark ground technique meant much of the vessels were covered in black, with few bands of ornamentation comprised of concentric circles and semicircles with or without central filling; hatched triangles, rectangles, diamonds, check-patterns, opposed groups of diagonals, wavy lines, and zig-zags. Unlike previous Mycenean styles, which conceive the entire vessel as a whole and are decorated as such in fluidity, the Protogeometric vessels are divided into distinct sections: the neck, the shoulder, the belly, section from the belly to the foot, and the foot is similar to bronze vessels in China. According to Desborough (1948) and Cook (1997), in the Protogeometric, within the system of sections, ornamentation is confined to only one section of the vessel, usually the neck, giving the style its reserved, simplistic look. This change toward a more geometricized and less organic aesthetic composed through a more orderly system

would sustain a long-lasting influence on later vessel styles.

After the Protogeometric style, the Geometric style succeeds it as the dominating style. Developed in 900 B.C., it too existed within the realm of the Dark Ages in Athens, though like Cretan and Mycenean styles, its influence far extends beyond where it originated. Like the Protogeometric, Geometric pottery has generally been discovered in burial sites, and in the same sites too, much to our convenience.

Geometric pottery went through a rapid stylistic transition at the start. In the Experimental Phase (EG I), only a select few Protogeometric motifs such as the zigzag, the check pattern, the dogtooth, and the groups of opposed diagonals were inherited. The Geometric style rejected Protogeometric circular ornamentation, instead embracing a much more rectilinear style, with the battlement and the meander as its defining features. EG I kept the Protogeometric dark ground technique, though with a glossier glaze and different position of ornamentation. The revolutionary structural change is a result of its shift towards rectilinearity. In the Protogeometric phase, decoration is limited to the shoulder, which was the most suitable for circular ornamentation. In the EG I however, decoration is often placed in narrow bands at the neck (between the handles) and belly, where the smoother surfaces are better suited for its more reserved linearity style. Later Geometric phases will inherit the experimental phase's rectilinearity, though not its structure (Coldstream, 2005).

Following EG I, EG II, the Athenian Geometric phase of the Geometric style cemented the inventions and breakthroughs of EG I, consolidating into a formulaic system of decoration: a panel of decoration at the handle and one zone elsewhere. The main invention in EG II is the gradual distinction between larger and smaller motifs, the latter of which evolves to serve the role of the ancillary. The most common large motif is the meander, the most common ancillary the dogtooth and the zigzag (ibid).

Around 850 B.C., 'Dark Age' Attica experienced rapid advancement in naval technology and communication, trade with the near East such as Levant and Phoenicians, and material prosperity. One consequence of increased trade with Phoenicians was the acquisition of gold and ivory as well as the advanced techniques needed to shape them, which appear to have been lost in the intervening period after the demise of Mycenae. This was accompanied as by the Phoenician alphabet, which was adopted in lieu of both Linear A and B. New economic conditions stimulated, yet again, a change in styles, this time the transition from early to middle geometric pottery. In the MG I phase; we notice an expansion of decoration panels. At some point panels at the neck expand to coincide with the entire length of the handles.

Some additional stylistic changes occurred in the MG II, 830–770 B.C., with the invention of the hatched meander, which, along with the multiple zig zag, acted as the central bands of ornamentation, supported by ancillary motifs.

With the coming of the Dipylon Master we welcome the final Late Geometric stage (ibid) (The Dipylon Master was a revolutionary ceramicist who invented the late geometric style. Ibid). The Dipylon pioneers stylistic change by covering the entire vessel with continuous web of ornament, while retaining emphasis of the focal points of the vessel, the neck, shoulder, the belly, through larger main motifs or figured scenes, harmoniously supported by minor motifs. The Late Geometric stage undergoes two smaller sub phases, though it coincides more with the vitality of specific painters and workshops (Coldstream 2005). The final exhaustion of Geometric styles coincided with the rise of the human figure being depicted extensively in pottery, first in black figure and later in red figure too (Cook, 1997).

Like Chinese Bronze vessels, Greek pottery vessels appear to have had certain ritualistic functions. Most of these vessels, such as amphorae and urns, are part of Dark Age burial practices (Coldstream 2005). According to accounts, in the ceremony, while the corpse is being burned on the pyre, relatives and friends hold a funeral feast in the person's honor. Several vessels are thrown into the pyre and smashed. After the cremation, the charred bones are collected and placed into the urn, which is lowered into the trench along with his or her possessions, often related to the person's profession. The hole is

afterward filled in, then marked with a stone slab (ibid). The amphorae accompanying the burial are often extremely ornate, due to their dual function as a symbol of wealth and status, in similar vein to the Chinese bronzes.

Stylistic Comparison

A synoptic view of the twin histories of Ancient Greece and China have been given in order to highlight the effects of shifting social and political terrains on the functions and design of particular artefacts. We come now to a comparative analysis of the material evidence of the two aesthetic traditions. Below are pictures of two vessels from Attica and China respectively, in the same time frame. The artifacts selected below are considered by scholars to be typical of the styles they belong to.

Figure 1. *Belly-handled Amphora Attributed to the Dipylon Painter Greek, from Athens, Late Geometric, 760–750 BCE Pottery. National Archaeological Museum, Athens*

Figure 2. *Wine Container (hu) China, Eastern Zhou dynasty, 770–256 BCE Metalwork. The Metropolitan Museum of Art, New York*

The Dipylon Amphora

The Dipylon Amphora is covered by geometric ornamentation. It is dated to 760–750 BCE, and is now situated in the National Ar-

chaeological Museum, Athens. Like most Late Geometric style Greek pottery, the only empty black surfaces are found near the foot. There is great variety between the bands of ornamentation, employing a range of traditional patterns, such as the classic hatched meander, dog tooth, and cross hatched diagonals. Key motifs, such as the hatched meander, are meticulously balanced with ancillary motifs to achieve an equilibrium pleasing to the eye. Despite the crowded *horror vacui* composition of the ceramic surface, there is a lack of movement, as the ornamentation is limited to strictly geometric patterns drawn with thin lines on a very small scale compared to the vessel's colossal size, layered in multiple bands.

At the focal point of the amphora, its shoulders, stand several vivid stylized human figures, participating in what seems to be like a burial ceremony. These figures are integrated into and complemented by the uniformity of the rest of the vase, as their presence is minimized through their geometricized body and slender proportions. At the center we find a person lying down, who is supposedly the dead here, surrounded by people both kneeling and standing, with their hands to their heads in despair. The imagery corresponds to the function of the vessel, as the amphora is used in the burial rites described earlier (Bohen, 1991).

The Eastern Zhou Hu

The bronze wine container from the Easter Zhou dynasty (770–256 B.C.) is dated to the 5th century B.C., and is now housed in the Metropolitan Museum of Art. The vessel is topped by a closely fitting lid, elaborately decorated like the vessel itself. The patterns atop the vessel are in low relief rather than painted, now much harder to perceive due to its now mottled surface due to corrosion. Unlike the Dipylon Amphora, this vessel is moderately sized for practical use as a wine container. Like the Dipylon Amphora however, in this vessel ornamentation is also organized into bands. The neck of the vessel is decorated by enlarged dog tooths patterns, the rest of the vessel body is covered by various traditional Chinese patterns in repetition. Like the Dipylon amphora, the Hu also distinguishes between main and ancillary motifs, in which the main animal motifs are framed by Yun Lei motifs atop pro-

truding cornices. These patterns are far from geometric, but rather quite complex and ornate, yet because of its rectilinearity, low relief, and *horror vacui* composition, the vessel radiates, in the author's opinion, a similar austere yet magnificent quality.

Also, very much like the Dipylon Amphora, the Hu also integrates elements that are more representational. Atop the lid, three small animals crouch facing outwards, while the two handles at the vessel's shoulders are shaped like a monster holding a ring in its mouth. These elaborate elements are integrated smoothly into the rest of the vessel.

Development: A Comparative Analysis

The Dipylon Amphora and the Hu are artifacts from wholly unrelated cultural traditions. Despite employing different techniques and materials, there are significant visual similarities to be observed, as demonstrated above in the visual analysis section. Both vessels are decorated by a *horror vacui* composition, with the entire vessel surface covered with detailed and intricate designs and patterns at a small scale, balanced in proportionate bands to achieve a harmonious, elegant, and austere effect. Both vessels are dominated by abstract rectilinear decorations with pictorial representations incorporated within it.

However, the development of the respective artistic traditions differs considerably due to different socio-economic and political circumstances. In Greece, little succession in political centers results in little succession in style. The cultural center shifts from Minoan Crete to Mycenae, then to Athens in the Dark Ages. Because of geographical movement, the change between pottery styles is more drastic. Growing socio-political centers are influenced by previous ones, but as they emerge and begin to dominate, these remnants of older styles are mitigated and eliminated. The only exception is in the Dark Ages, in which cultural center had been situated, unchanged, for two centuries, which led to the consistent development of the Geometric pottery style, which bore greater resemblance to Chinese bronze traditions. In China, while there is a change in dynasties, succeeding dynasties often deliberately maintained a continuity in rites, to justify their political power through

mythical narrative. The Zhou, for instance, focused on succeeding the rites of the Shang, which accounted for their similar styles.

The rarity of art, due to the rarity of its material and the skill needed to create it, endows it with a social function of a status symbol, which holds true for both ancient cultures, despite the differences in social structure (Murray, 1991). In both cultures, the function of these vessels has transcended the original function of vessels, which is to hold or contain something, to symbolize wealth, power, and prestige. Though not much about these ancient social systems are confirmed, scholars propose that while Greek social structures were pervasively more fluid, from the decentralized palatial structures in Minoan Crete and the proposed "big men" model for the Dark Ages, social stratification was significant, and artifacts such as the Dipylon Vase were only to be enjoyed by a select elite. In China, status is frequently inherited, and as in Greece, vessels are important status symbols. Furthermore, in China especially, such vessels hold significance because they symbolize the exercisable power over land and people entrusted by the crown, or a mandate to power. In early Greece, when there is a lack of artistic production, pottery is frequently imported to showcase wealth and power. Similarly, both Greek pottery vessels and Chinese bronze vessels are used in relation to rituals concerning the supernatural. Pottery vessels are used in popular cremation burial practices in the dark ages, whereas bronze vessels are used in elaborate rituals in China to affect nature.

Thus, we can see that the materiality and ornamentation of these two objects encapsulate and represent the histories of the cultures which produced them. While their apparent resemblance may be misleading for anyone seeking to argue for cultural contact, the resemblance nevertheless serves to draw our attention to similar processes and developments within two influential civilizations.

To further illustrate this, we may analyze aesthetic principles underlying ornamentation in the respective cultures, particularly in respect of representation. First, we may draw a close comparison between the geometric patterns from Greek Geometric pottery and the Chinese ritual bronze, taking the

Greek meander pattern and the Chinese *Yun Lei wen* as examples due to their longevity, since both patterns have persisted throughout the stylistic evolution of the respective schools. The meander was derived from the proto-geometric period, heavily influenced by Mycenaean pottery, and was popularized throughout the geometric period despite significant stylistic shifts in the Late Geometric. On the other hand, the *Yun Lei* was also popular throughout the Xia, Shang, and Zhou (Chen, 2022). Visually, these patterns are remarkably similar. They act as bands of ornamentation supplementary to more significant pictorial representations, though they may also in patterned surfaces when pictorial elements were lacking (this is more frequently the case for Greek pottery) (Ibid). The *Yun Lei* motif is composed of lines winding in round and angular spirals, rendering *Yun Lei* decoration bands similar to the Greek meander. However, while attempts in the 1930s to assign the Greek meander representational meaning have failed, the *Yun Lei* is noted to represent the powers of nature, the round spirals representing clouds (*Yun)* and the angular ones representing thunder (*Lei)* (Müller, 1933). In addition, the nature of pictorial representations on the respective vessels also differ. While the figures atop the Dipylon Amphora could be described as narrative and anthropomorphic (Falkenhausen, 2008), the birds atop the Hu vessel is purely decorative, though more naturalistic. Perhaps this early difference in representation accounts for the divergence in the development of these two artistic traditions. The narrative and anthropomorphic depictions enveloped by geometric motifs lay precedent to the development of classical Athenian pottery. On the other hand, due to the political instability, the development of bonze vessels is less traceable. In the Late Eastern Zhou dynasty, anthropomorphic narrative illustrations, or in other words, "figures in action" appeared atop bronze vessels for the first time. These bronze vessels are often termed "pictorial bronzes" (ibid, p. 54). An example of this would be a hu vessel excavated at Baihuatan, Chengdu, Sichuan, canonized in its appearance in The Great Bronze Age of China edited by Wen Fong (Fong, 1980) (Fig. 3)

The pictorial representations upon this vessel are quite similar to those upon the Dipylon Amphora. However, in this vessel, the characteristic geometric motifs are no longer present, illustrating how the traditions of bronze vessels have been lost due to political instability.
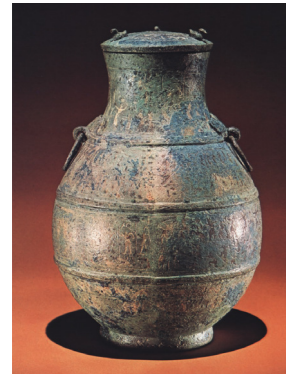
Figure 3. Hu. *China, Late Eastern Zhou Dynasty, late 6th–5th century B.C. Metalwork Sichuan Sheng Bowuguan, Chengdu*

Thus, we may conclude that Greek Geometric pottery and Chinese ritual bronze traditions resembled in form and style, due to their similarity in composition and compositional elements, but differed in representation, which accounted for its later divergence in form and style.

Conclusion

The incipit idea for this paper was to investigate the underlying causes for the similarities in stylistic motifs among Greek geometric pottery and the Chinese bronzes. The paper has therefore focused on building a synoptic view of the two cultures and contextualizing the vessels therein. The Dipylon Amphora is a product of a long pottery tradition, spanning from Minoan Crete, to Mycenae, then to the Greek Dark Ages, which underwent significant shifts as the cultural center moved from one place to the next. Greek social structures were fluid, and political structures decentralized. Trade in the Mediterranean flourished as Greece participated in a network of artistic influences with other Mediterranean cultures. The Hu is part of China's long tradition of bronze ritual vessels, which underwent gradual change through the dynasties of the Xia, the Shang, and the Zhou. Springing from the mysterious sites of the Erlitou and Erligang, the successors

stayed in these areas and continued their bronze traditions as a symbol of their lineage and mandate to power. Trade is much less significant in ancient China, though artistic influence between various settlements still exists.

In the analysis, the comparison has been conducted in three levels. First, analysis of historical and political development highlighted how (in)stability influenced both Greek and Chinese artistic tradition in terms of consistency. Greek settlements were situated in the midst of the Mediterranean, rendering them susceptible to assimilating stylistic characteristics of nearby cultures. In China however, the lack of independent rival foreign powers maintained a more stable lineage of bronze vessel traditions.

Second, the stylistic traditions were linked to the relevant cultures' sociology, which revealed that while differences in social structure between Greek and Chinese settlements cannot be ignored, in both worlds, the function of these vessels extended beyond physical utility as containers, demonstrating wealth and power. In both cases, the vessels were integrated into elaborate ritualistic practices to further reinforce their importance.

Third, the two specific vessels, both from the final periods of their artistic traditions, were analyzed aesthetically. From the analysis we may deduce a similar visual preference between the two cultures, which is a tendency of rectilinearity and maximalism in applying abstract patterns, combined with pictorial representations introduced as a focal point. The utilization of this certain style seems to correlate with the intention to consolidate an idea of power and or prestige, as well as the maturation of the artistic tradition that results from political stability, as mentioned before.

By employing a comparative methodology, this paper highlights shared human experiences across different civilizations, prompting a re-evaluation of prevailing narratives in the study of ancient art. This case study illustrates how art reflects the intricacies of societal evolution, political dynamics, and economic strategies, thereby deepening our comprehension of human history. This author advocates for a cross-cultural perspective that addresses historiographical gaps and fosters a nuanced recognition of human artistic endeavors. Through similar interdisciplinary approaches, such papers call for a reassessment of how art history is integrated into larger cultural studies, and the role of comparative analyses in refining our understanding of the interplay between social, political, economic, and aesthetic structures.

References

Allan, S. (2007). Erlitou and the Formation of Chinese Civilization: Toward a New Paradigm. *The Journal of Asian Studies,*–66(2).– P. 461–496. URL: https: //doi.org/10.1017/ S002191180700054X

Allan, S. (1984). The Myth of the Xia Dynasty. *Journal of the Royal Asiatic Society of Great Britain and Ireland,*– 2.– P. 242–256.

Balch, E.S. (1917). Atlantis or Minoan Crete. *Geographical Review,*– 3(5).– P. 388–392. URL: https://doi.org/10.2307/207382.

Barnes, G.L. (2015). Bronze Age Beginnings: (2000–850 BC). In *Archaeology of East Asia: The Rise of Civilization in China, Korea and Japan*, (P. 181–205). Oxbow Books. URL: https://www.jstor.org/stable/j.ctt19893vd.14.

Bohen, B.E. (1991). The Dipylon Amphora: Its Role in the Development of Greek Art. *Journal of Aesthetic Education,*– 25(2).– P. 59–65. URL: https://doi.org/10.2307/3333075

Broodbank, C. (2004). Minoanisation. *Proceedings of the Cambridge Philological Society,*– 50.– P. 46–91.

Chang, K.C. (1977). The Continuing Quest for China's Origins II. The Shang Civilization. *Archaeology,*– 30(3).– P. 186–193.

Chen, S., Deng, F., Dong, L., Li, J., Liu, J., Liu, X., Liu, X., Qin, H., Sun, H., & Yang, H. (Eds.). (2022). *A General History of Chinese Art. Volume 1: From the Prehistoric Era to the Zhou Dynasty*. Berlin: De Gruyter.

Claus, P. (2023, August 20). Minoan Language Linear A Linked to Linear B in Groundbreaking New Research. *GreekReporter.com*. URL: https://greekreporter.com/2023/08/20/minoan-language-linear-a-linear-b

Coldstream, J. N. (2005). *Geometric Greece: 900–700 BC* (2nd ed.).– London; New York: Routledge.

Cook, R. M. (1946). Ionia and Greece in the Eighth and Seventh Centuries B. C. *The Journal of Hellenic Studies,*– 66.– P. 67–98. URL: https://doi.org/10.2307

Cook, R. M. (1962). The Dorian Invasion. *Proceedings of the Cambridge Philological Society,*– 8(188).– P. 16–22.

Cook, R. M. (1997). *Greek Painted Pottery* (3rd ed.).– London; New York: Routledge.

Demakopoulou, K. (2004). Knossos and the Argolid: New Evidence from Midea. *British School at Athens Studies,*– 12.– P. 405–410.

Desborough, V. R. (1948). What Is Protogeometric? *The Annual of the British School at Athens,*– 43.– P. 260–272.

Donlan, W. (1985). The Social Groups of Dark Age Greece. *Classical Philology,*– 80(4).– P. 293–308.

Drews, R. (1983). The Meaning of Basileus in Geometric and Archaic Greece. In *Basileus: The Evidence for Kingship in Geometric Greece*, (P. 98–115). Yale University Press. URL: https://doi.org/10.2307/j.ctt2250xn9.7

Feng, L. (2003). 'Feudalism' and Western Zhou China: A Criticism. *Harvard Journal of Asiatic Studies,*– 63(1).– P. 115–144. URL: https://doi.org/10.2307/25066693

Fong, W., Bagley, R. W., So, J. F., & Hearn, M. K. (1980). *The Great Bronze Age of China: An Exhibition from the People's Republic of China*. New York: The Metropolitan Museum of Art.

Hemingway, S. (2012). Art of the Aegean Bronze Age. *The Metropolitan Museum of Art Bulletin,*– 69(4).– P. 4–48.

Higgins, R. (1981). *Minoan and Mycenaean Art* (Revised Edition). New York and Toronto: Oxford University Press.

Ian, J. (2016, April 21). *A Revolutionary Discovery*. MCLC Resource Center. URL: https://u.osu.edu/mclc/2016/04/21/a-revolutionary-discovery

Kelder, J. M. (2010). *The Kingdom of Mycenae: A Great Kingdom in the Late Bronze Age Aegean*. Bethesda, Md: CDL Press.

Knapp, A. B., & Manning, S. W. (2016). Crisis in Context: The End of the Late Bronze Age in the Eastern Mediterranean. *American Journal of Archaeology,*– 120(1).– P. 99–149. URL: https://doi.org/10.3764/aja.120.1.0099

Kotsonas, A. (2016). Politics of Periodization and the Archaeology of Early Greece. *American Journal of Archaeology,*– 120(2).– P. 239–270. URL: https://doi.org/10.3764/aja.120.2.0239

Lemos, I. S. (2023). The 'Dark Age' of Greece. In *The Edinburgh Companion to Ancient Greece and Rome*. The Edinburgh University Press.

Liu, L. (2009). State Emergence in Early China. *Annual Review of Anthropology,*– 38.– P. 217–232. URL: https://doi.org/10.1146/annurev-anthro-091908-164513

Lobell, J. A. (2015). The Minoans of Crete. *Archaeology,*– 68(3).– P. 28–35.

Von Falkenhausen, L. (2008). Action and Image in Early Chinese Art. *Cahiers d'Extrême-Asie,*– 17(1).– P. 51–91. URL: https://doi.org/10.3406/asie.2008.1272

MCLC Resource Center. (2016, April 21). A Revolutionary Discovery. URL: https://u.osu.edu/mclc/2016/04/21/a-revolutionary-discovery

Müller, V. (1933). Review of Review of Greek Geometric Art Its Symbolism and Its Origin by A. Roes. *American Journal of Archaeology,*– 37(4).– P. 635–636. URL: https://doi.org/10.2307/498132

Murray, O. (1991). The Social Function of Art in Early Greece. *Studies in the History of Art,*– 32.– P. 22–30.

Nivison, D. S. (2018). Kong Jia of Xia, 1577–1569 BC. In A. C. Schwartz (Ed.), *The Nivison Annals: Selected Works of David S. Nivison on Early Chinese Chronology, Astronomy, and Historiography* (1ˢᵗ ed., P. 116–127). De Gruyter. URL: https://www.jstor.org/stable/j.ctvbkk48t.14

Stanislawski, D. (1973). Dark Age Contributions to the Mediterranean Way of Life. *Annals of the Association of American Geographers,*– 63 (4).– P. 397–410.

Wang, G. (2019). Introduction. In *Collection of Ancient Chinese Cultural Relics – Vol. 2.* (P. 1–4). ATF (Australia) Ltd. URL: https://doi.org/10.2307/j.ctv141634q.3

Whitley, J. (1991). Social Diversity in Dark Age Greece. *The Annual of the British School at Athens,*– 86.– P. 341–365.

Zhao, A., Tong, C., & Moss, W. (1989). Exquisite Art and Precious Archives: China's Records in Bronze. *The American Archivist,*– 52(1).– P. 94–98. URL: https://doi.org/10.17723/aarc.52.1.g16x77202n015v17

Contact: ninazhang1002@163.com

A HISTORIC AND AESTHETIC ANALYSIS OF GREEK"DARK AGE"

Section 3. Philosophy

JOHN LOCKE & DESCARTES REFUTE ON HUME'S CONCEPT OF SELF

Meifan Zhu [1], Alexander Rosenthal [1]

[1] Thomas Jefferson School, Missouri, USA

Abstract

In many literary works, the characters transform into a "new man". For example, Tom Joads in *Grapes of Wrath* is transformed from a selfish character who prioritizes his own survival under the social background of the Great Depression. After traveling with his family to California. Young Joads gradually become sober towards the suffering of lower class Americans, turning into a righteous man who fights for social justice. Nevertheless, I disagree with the concept "new man", because despite the ceaseless stream of time and transformative experiences we undergo, our personal essence is constant through time. Meaning that we do not form a complete new self through the transformation of time and experience. To understand this we will be examining the concepts of personal identity defined by memory and consciousness throughout the period of human life. Locke believes that experiences form a human being, and that the concept of individual consciousness will demonstrate the inherent continuity and persistence of the self that are presented through a comprehensive understanding of nature's capacity for transformation over the span of time. Therefore factors such as individual perceptions and impressions in shaping one's sense of self, along with the influence of moral development and virtue on individual identity do not alter the core of identity. Indeed, Descartes, who views the human consciousness as the only object that holds true in the universe, agrees that we are not able to perceive the objective truth. The view point we will argue is in contrast to that of Hume and his bundle theory of identity; we will, therefore, first give an exposition on Hume's critique of a stable personal identity, which it separated into qualitatively identify, and numerical identity.

Keywords: *Philosophy, Self, identity, Time, John Locke, Descartes, Aristotle, Conscious, Identity, Reality, René Descartes, David Humes, time, change*

Thesis

Hume challenges Locke's idea of a fixed and continuous self, emphasizing the role of perceptions and impressions in shaping our identity, and Decartes's philosophy on the objective existence of beings. He believes that the set

identity alters through time instead of building upon each other. This claim shifts focus to development: Aristotle's ethical framework highlights the importance of moral development and virtuous actions in the formation and evolution of one's identity. By integrating these philosophical perspectives, this thesis aims to examine how identity persists using Locke's theory on personal identity that centers around memory and consciousness suggesting that we stay the same as long as our memory exists.

Locke, Descartes, and Humes

David Humes is famous for his skepticism towards the consistency of self, believing that: Hume is an empiricist who thinks all knowledge comes from the senses – and the impressions (the *us* present in other's views) derived from the senses are constantly shifting. Meaning our sense of self comes from ideas of the self; the idea of self comes from impressions; impressions change. Since we are a bundle (various impressions) of our character – physical or mental – that throughout time the characters/bundle change, the self cannot be persistent; as he mentioned in *A Treatise of Human Nature*, 'nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement'. He believes that humans generally fall into the trap of inferring self, meaning that the self humans argue is simply a few recurring characteristics that we believe to be the true self. Yet the true self is the objective self that is defined by arbitrary truth. We misunderstand the two because humans generally fail to incorporate the concept of change – we constantly change throughout the passing of time; and the subconscious will to define ourselves.

In order to understand the inferred self and the true self, it is necessary to point to the deciding factor of "true". Descartes believes that we rely on our senses to view the world, but since our senses are deceivable, they are unreliable. Descartes would arguably agree more to this experiment than John Locke. Since Decart believes we live inside our minds, therefore the truth is whatever the mind informs the "self", in other words, what we think is who we are; everyone has a different interpretation of the events that happened in their lives, so the event doesn't matter. The true component of the self lies in our perception of the event. In double meditation, the Cartesian soul is a non-existent entity, also non-existent (res cogitans). The Cartesian spirit is a part of the true soul. Decart distinguished the spirit from the body in part to establish the fact that the soul (that is – immortal), which opens up the possibility of establishing the immortality of the soul, since it implies the idea that the decomposition of the body does not mean the destruction of the soul.

This raises the question of what is reality, and how we can perceive reality. He explains "Cognito ergo sum" – I think therefore I am – meaning that only the act of thinking about one's existence is evidence of the presence of mind that is distinct from the body, which we cannot prove to be reality. From this theory, we can infer that truth only exists in our minds, so as humans we are unable to comprehend objective truth. No matter the true self or the inferred self, are two explanations of the self, so both must be derived from the *self*. Therefore if there is no objective self, then to us the only true self is the inferred self. The objective we speak about is an inferred self.

Locke, on the other hand, rejects the ideas in human nature, John Locke disagreed that some knowledge is innate. Moreover, Locke believed in broadly equivalent knowledge, rather than knowledge based on foundations. preview. In his book *An Essays Concerning Human Understanding*, Locke clarified that thinking relies heavily on the senses and reflection. Moreover, he concluded by saying that all ideas are born from reflection and observation. Knowledge is therefore based on experience.

Different philosophers have distinct take on the footstone of identity: Hobbes believes that it is the bundle of character; Locke believes that is it memory – thus a person's identity is not rooted in static or unchanging characteristics. Instead, it arises from a dynamic interplay of various factors that happens due to our unique experience. He considered the self to be founded on consciousness (viz. memory) and not on the bundle of characteristics that are impressions of the body or soul; Descartes believes that it is the mind; Epitetus believes it's prohairesis – judgment that differentiates human beings from animals. It is an important factor that defines the self, since it breaks away from

natural instincts present in all living beings, prioritizing the uniqueness of the mind. It is widely understood to be an argument against the persistence of self.

To explain this there are three key concepts to clarify: The concept of forever passing time, and the non existing present; what is "change" – how can we define the concept of "same"; or how is the inferred self different from the true self.

Descartes views time as a component of movement and influences that coordinates his set of basic conservation principles and laws; more importantly he believes that time is the most systematic discussion and assumes that time is reducible to both thought and movement. He makes the point that time only exists in the heads of human beings, therefore even though we follow a universal standard, every person feels time differently. On the other hand, Hume makes the assertion that "time is nothing but the manner in which some real objects exist" (T 1.2. 5.28). For many people, they use the past to build the future as a way to control the future. In both cases, the future happens after the past, as long as this truth continues then the future is always affected by the past. Just as the world now is affected by the world from last second, last minute, last year, last decade, century, stretching to the conceptual beginning of time. As we humans are present in time, our identity develops in the same way. The transformation in self is built up like how the past is built up, it does not make the self different.

In the quote "we never step in the same river twice" (Heraclitus) widely used to reminisce failed attempts to relive the past, it describes the forever changing of beings. So our standard to measure the changes (time) is also forever passing. So the only invariant is that we are forever changing. In other words, in order to stay unchanged requires being different. To clarify, we can use the concept of consistency, meaning that the two beings across time agree with each other. Imagine planting a small sapling in your garden. After several decades, it has grown into a mature tree. The tree's appearance and character have changed dramatically. In this case, to Humes, the sapling and the tree are different. However, the sapling agrees with the tree in terms of continuous development, adaptation, and change. Despite striking differences in appearance,

size, and function, they are linked by an unbroken continuum of change. The sapling lays the foundation for the tree, while the tree embodies the initial potential of the sapling.

Thus it's impossible to use the concept of *sameness* for Hume to define the world we live in because it is an imaginary concept. You may then ask the question – how did humans create this concept? The answer is parallel to Hume's definition of the inferred self. Since humans are an insignificant existence in the continuum of time, we observe nature (other long lasting objects) as unchanging, it is only a tool used to define our perception of the world; therefore true sameness is constant change. The *true self* is a concept we believe in but is actually the *inferred self*, similar to our limited understanding of *sameness*.

So what is "change"? What is its relation to "same"?

If we claim that x and y are qualitatively identical, we are asserting that x closely resembles y in every aspect. On the other hand, stating that x and y are numerically identical implies that they are not two separate entities but one. The question of whether x and y can share every quality while not being numerically identical is a topic of debate. However, it appears possible for x and y to be numerically identical while lacking qualitative identity, insofar as they may possess different qualities at different points in time.

Then A and B can only be the same entity if they share all properties, qualities, and characteristics completely, without any variation or distinction. Yet, there are many ways to determine if two objects are the same. For example, one could argue that two bananas are the same since they belong to the category "banana". At the same time, one could argue that they are two separate objects, despite their shared characteristics. To resolve this problem, I will introduce two terms to categorize the concept of the "same".

According to numerical identity, A and B are not two separate entities but one entity capable of representing different qualities at different times. By this definition, the core of one's self remains unchanged over time, irrespective of external circumstances or personal growth. Furthermore, this definition enables a view of the self as a fixed and singular entity, defined by its numeri-

cal identity (As argued previously – sameness is constant change – yet to answer the question of change in relation to identity, it is important to understand different types of changes we experience. According to Aristotle, there are two types of changes that form our consciousness/memory: substantial change and accidental change. Substantial change is purposeful changes made that are manipulated by the existing self. In short, it is the decisions made by the self to develop the self. So it is consistent. Accidental changes are denotation – changes indirectly made by the self. They may appear to be a factor that intervenes with the development of self, it is unavoidable by all beings. Therefore it is a common factor, therefore is relatively insignificant). It implies that the individual remains the same entity throughout his or her life, regardless of changes in beliefs, experiences, or qualities. It disregards the fluid nature of personal identity and the potential for personal transformation and growth.

This concept leads us to ask: what consists of the self?

It is common to believe that a human is able to experience a complete transformation. For example, in the novel *Steppenwolf* – on a personal transition of the character: Harry Haller begins the novel being a superficial Dionysian (people who relate solely to sensual and emotional aspects of human nature) who is misanthropic and cynical; he locks his mind in a cage, consisting solely of writing, reading, and endless loneliness. As he reaches the extreme of his lifestyle through meeting Hermine, who introduces influences such as dancing, music, and alcohol, Harry eventually discovers his free self. He did so by killing his previous hypocritical self, thus creating his true self. In this novel, transformation is the main component of self. Even though this is a clear example of how one develops, it does not bring forth the idea that only by killing previous false selves can one discover their destiny. On the contrary, it proves how we gradually build our identity through our thoughts and experience. Pushing this a step forward, it can be inferred that we do not decide the self, instead we discover the self by making decisions that lead us infinitely closer. Therefore judgment that makes up the self is a direct access to understanding ourselves. For example, in Augustine's *Confessions*, the narrator develops from self presentation to self realization by communicating to God, which is arguably his inner soul.

Therefore, to prove that there is an inner core different among all beings in this world, imagine a theoretical experiment. If a certain number of people are each put into a "The Truman Show", where all details they experience from the moment of birth are planned to be the exact same. After years of experiment, would they turn out to be the same person? The answer is an apparent no. Many real life examples prove that people of similar background can live a completely different lifestyle. The subject's emotional reactions, perspective, processing of information, and inner experience are all different; these all originate from a unique system, and this system creates the inner core of a human being. The system can gradually build up due to new experiences, but cannot be fundamentally altered. The fact that each one has their own self-consciousness would for Locke and Descartes distinguish them, though they have the same experiences.

Exceptions

Using studies such as: childhood abuse directly carries mental disorders on to adult life, to collect evidence and prove the constant self is inaccurate. This is because memories can be deceived; the true traumatic experience may be filtered through the brain's self-protection mechanism, leaving many details inaccurate. There's also the problem of biased admission. A retrospective study of anxious adults might reveal that many of them grew up with divorced parents, but what about the many divorced children who did not develop anxiety and therefore never participated in the study? It is difficult to determine the true importance of a single factor in retrospective studies.

During the condition of amnesia, previously formed connections are maintained in the patient's brain, even though he/she may not be using them. Therefore many may argue that one does not have a sense of personal identity, or a drastic change in personal identity. Yet, while Locke believes memory is important, the function memory plays is mainly in someone's subconsciousness. In this case, the specific event is blocked from a patient,

meaning he/she cannot actively recall the incident, but this doesn't mean it's not a part of the memory system, in fact, memories as such function strongly when making subconscious decisions, causing active results in one's life. Therefore, Locke would say a person with amnesia would be a completely different person, for all his consciousness – the only factor that can determine the self – is lost.

Conclusion

As Tom Joads leaves his family to pursue a heroic journey, he faces a new phase of his life; nevertheless, the memories from Oklahoma and the journey to California will constantly affect this phase. While Hume may argue that he developed a new aspect of his bundle personality, Locke and Descartes, though through different lenses, argue that it is the past self that decides his present actions. We are persistent throughout our span of time, for changes in personality, physical appearance, and all sections of a full human being does not change the entirety of our existence. Traces of such concepts can be found when a person is making decisions in life, in many cases, the strong sense of destiny in life may be present due to this exact reason.

Work Cited

"Identity Over Time (Stanford Encyclopedia of Philosophy)," October 6, 2016. URL: https://plato.stanford.edu/entries/identity-time

Olson, Eric T. "Personal Identity." Stanford Encyclopedia of Philosophy, June 30, 2023. URL: https://plato.stanford.edu/entries/identity-personal

Cleave, Matthew Van. "Personal Identity." Introduction to Philosophy. Accessed October 15, 2023. URL: https://pressbooks.online.ucf.edu/introductiontophilosophy/chapter/personal-identity

"Personal Identity | Internet Encyclopedia of Philosophy," n.d. URL: https://iep.utm.edu/person-i/#SH1b

"Change and Inconsistency (Stanford Encyclopedia of Philosophy)," February 13, 2020. URL: https://plato.stanford.edu/entries/change

Philosopher. "Aristotle's Theory of Change." Insert Philosophy Here, January 4, 2022. URL: https://insertphilosophyhere.com/aristotles-theory-of-chang.

"Persistence in Time | Internet Encyclopedia of Philosophy," n.d. URL: https://iep.utm.edu/per-time/ Tobia, Kevin.

"To Be True to One's Self Means Changing to Become That Self | Aeon Essays." Aeon, April 8, 2021. URL: https://aeon.co/essays/to-be-true-to-ones-self-means-changing-to-become-that-sel f

Otsuka, Michael. "Personal Identity, Substantial Change, and the Significance of Becoming." Erkenntnis, September 22, 2017. URL: https://doi.org/10.1007/s10670-017-9938-7.

Drummond, John C. "Self-Identity and Personal Identity." Phenomenology and the Cognitive Sciences 20,– No. 2 (April 1, 2021): 235–47. URL: https://doi.org/10.1007/s11097-020-09696-w.

Nimbalkar, Namita. "John Locke on Personal Identity." Mens Sana Monographs 9, no. 1 (January 1, 2011): 268. URL: https://doi.org/10.4103/0973-1229.77443

Stehlíková, Eva. "Lucius Annaeus Seneca." On The Shortness of Life, November 13, 2017,– P. 13–27. URL: https://www.muni.cz/vyzkum/publikace/1395119

Hartley, David M. Observations On Man, His Frame, His Duty, and His Expectations, 2010. URL: http://ci.nii.ac.jp/ncid/BA20700778

"The Rise and Fall of Soul and Self: An Intellectual History of Personal Identity." Choice Reviews Online 44, no. 05 (January 1, 2007): 44–2637. URL: https://doi.org/10.5860/choice.44-2637

BIOLOGY AND CULTURE: EVALUATING THE RELIABILITY OF MORAL INTUITIONS THROUGH UTILITARIAN ETHICS

Ziyan Huang [1]

[1] The Winsor School, USA

Abstract

This paper explores the reliability of moral intuitions through the lens of utilitarian ethics, examining both their biological and cultural underpinnings. It argues that while human moral intuitions have a biological basis that aligns with utilitarian principles, these intuitions are significantly influenced and often altered by cultural and societal norms. The first section discusses the biological foundations of moral intuitions, highlighting research on genetic predispositions and neurological factors that support fairness and cooperation as fundamental moral principles. The second section examines how socialization and cultural exposure shape and sometimes distort these intuitions, leading to ethical practices that may diverge from utilitarian standards. Case studies, including the practice of ritual cannibalism, illustrate the conflict between innate moral responses and culturally derived values. The paper concludes that while biological intuitions provide a fundamental ethical framework, the influence of cultural norms necessitates a critical evaluation of moral beliefs to ensure alignment with utilitarian ethics. This underscores the importance of not solely relying on intuitions shaped by cultural contexts but rather assessing them against objective ethical standards.

Keywords: *moral intuition, utilitarianism, neurological foundation, implicit learning, moral relativism*

Introduction

Is it acceptable to eat other human beings? Your instinct to a problem like that is what scholars call moral intuition. Intuition is defined as "a form of knowledge that appears in consciousness without obvious deliberation" (Psychology Today). At birth, humans are born with a set of intuitions that help us live in a communal setting given our nature as social animals. In addition to those funda-mental intuitions, humans continue to develop their intuitive toolbox as they learn from their experiences and go through the process of socialization. With all that being said, do we have any good reasons to trust our moral intuitions?

The definition of morality is an ongoing debate between philosophers. This paper takes on the utilitarian approach, in which the 19th century English philosopher John Stuart Mill defined moral behaviors as those

that maximize benefits to the greatest number of people (Mill, 1879). Thus, this paper will evaluate the morality of human intuition based on the principle of utility. While our basic biological intuitions follow a moral consensus, the moral intuitions we gain from our society cannot be fully trusted as cultures may follow moral standards that go against the principle of utility.

Biological Intuitions

Modern science shows that the makeup of the human brain and neurological hormones provide humans with moral intuitions that benefit the group and in turn help us live in a social setting. In a study exploring the neural basis of intuitions relating to fairness, researchers established that "genetic factors moderately contributed to unfairness-evoked activation in the bilateral anterior insula (AI), regions representing the intuition of fairness norm violations (mean heritability: left 37%, right 40%)" (Wang et al, 2019). These findings demonstrate that the area in our brain responsible for reacting to issues concerning fairness is 37% and 40% determined by our genes on the left and right sides of our brain respectively. As previously defined, moral behavior is one that brings the most benefits to the greatest number of people. Thus, fairness, which ensures that everyone is treated in the same way, is an element of morality (Haidt and Joseph, 2006). The fact that our repulsion towards "unfair proposals" is programmed in our genes means that no reasoning is needed to form such a reaction, showing that humans possess moral intuitions that follow the principle of utility at a fundamental level.

The hormones of the human brain's neurological network also compel humans to behave morally. Patricia S. Churchland, a neuro-philosopher, writes, "By and large, humans…are strongly motivated to be with group members and to share in their practices" (Churchland 2011, pg. 8). This motivation to be part of a group manifests as the happy feelings that the human neural-system releases when the individual is among other humans. For example, oxytocin (OXT) is a "feel-good" hormone that encourages individuals to be more sociable and is released when a person is with their kin (Churchland,

2011). In an experiment testing whether intranasal oxytocin increases cooperation within males, participants were split into two groups and could make three choices with the 10 euros they were given: keep the money for themselves, give it to their group, or give it to their group while taking additional money from the another group. The researchers found that "the men who got the intranasal OXT treatment were significantly more cooperative", with only 17 percent keeping the money for themselves compared to the 52 percent in the group untreated with OXT (Churchland, 2001, pg. 75). Since oxytocin encourages cooperation and allows benefits to be shared among the group, this experiment provides further evidence that humans have moral intuitions encoded in their biological makeup.

Given that fairness and group cooperation produce benefits for the group and therefore maximize utility, the two studies above prove that our basic biological intuitions are moral; however, these intuitions do not account for a person's complete ethical perspective. Churchland notes that "the platform is only the platform; it is not the whole story of human moral values," indicating that the moral intuitions gained from our biological programming only lay the foundations for our ethical beliefs and thus cannot represent the trustworthiness of all of our moral intuitions.

Socialization

In addition to our biological intuitions, humans obtain new intuitions by absorbing the norms of their societies and cultures. Churchland credits the human reward-punishment system for this phenomenon where humans are driven "to learn social practices" (Churchland, 2011, pg. 16). To obtain the positive feelings that arise from being accepted in a community, humans unconsciously adopt societal norms through a process known as implicit learning (Woodward and Allman, 2007). Implicit learning starts from a young age, where humans observe and absorb information about their culture until the knowledge is incorporated into their intuitions. As opposed to explicit learning, humans undergo this process without being consciously aware. An example of im-

plicit learning was shown in an experiment in which American students were exposed to media coverage of the 2015 Paris attacks by Muslim terrorists. Through a series of methods developed to measure change in the intuitions of the participants, the researchers found that participants developed a more prominent authority intuition, defined as the "respect for and deference to traditions and hierarchies" (Tambourini et al., 2007, pg. 4). The increased salience of authority intuition, another element of morality defined by Haidt and Joseph (2011), led to "increases... [in] preferential treatment of ingroup over outgroup members" (Tambourini et al., 2007, pg. 8) and greater prejudice towards outgroups, in this case, Muslims (Tambourini et al., 2007). Just through consuming media, a component of culture, the moral intuitions of the participants were modified to hold prejudice towards the muslims. Thus, this passive observation of cultural elements leads to implicit learning and impacts our moral intuitions. Furthermore, in an experiment in which participants were shown images of African Americans widely known to be positive figures, the participants "showed a significant reduction in implicit negative attitudes toward African Americans" (Dasgupta & Greenwald, 2001; Pizarro and Bloom, 2001, pg. 194). As such, the study shows that people's views on race, a social construct, are dependent on their exposure to other races within their own society. By exposing participants to African Americans exemplars, participants were able to change the ways they "implicit[ly]" thought of African Americans. Such a change in perspective is equivalent to an alteration of the participants' moral intuitions through implicit learning. As these studies show, our intuitions are constantly undergoing modifications as a result of our cultural experiences.

As opposed to biological moral intuitions, which are largely shared by humans at birth, cultures around the world have differing and often contrary moral values. For example, while marriage is exclusive to two persons in the United States, polygamy is commonly found in sub-Saharan African countries (Kramer, 2020). This makes it impossible for everyone to possess moral intu-

itions that align with the principle of utility, the concept of maximizing benefits for the greatest number of people. Because the diversity of cultural beliefs produces practices that cannot all be morally valid, our moral intuitions that are shaped by societal and cultural norms cannot be trusted. As individuals who grow up in an environment adopt the ethical standards of that culture, they can develop moral intuitions that discriminate against specific populations. For example, conservative religions that do not view women as equal do not hold intuitions that are moral based on utilitarian standards as such practices repress and discriminate against half of the world's population. Immoral cultural values also occur when an in-group that is smaller than the out-group holds prejudicial beliefs against the outgroup. In a case like this, the in-group's beliefs about what is beneficial may not be what is beneficial for humanity as a whole. For instance, white supremacists believe that they are superior to other races and advocate for laws or reforms that benefit whites at the cost of all other races. Since white supremacists are a small population compared to the populations they want to suppress, individuals who grew up and adopted the beliefs of a white supremacist environment are not moral by the utilitarian definition. Thus, as one's moral intuitions can be shaped by immoral culture standards, they should not be blindly trusted.

Conclusion

While genetics and neurological systems have encoded moral intuitions that allow humans to be part of a society, more advanced moral intuitions that are learned from an individual's culture may not always consider everyone's benefits. When readers first encountered the idea of cannibalism mentioned above, many may have been repulsed by the thought; however, this practice exemplifies the conflict between biological and social intuitions. For most people, their biological moral intuitions tell them that cannibalism is wrong; however, specific societies have developed cultural beliefs that promote "ritual cannibalism," oftentimes as a funeral procedure. The Fore tribe in Papua New Guinea, for example, eat their dead loved ones so that they

hold a piece of them inside themselves forever (Tikkanen, 2019). Given that rituals are purely constructed through cultural processes, acceptance of cannibalism is an example of culturally derived moral intuition. While this example of ritual cannibalism is not immoral by utilitarian standards, it illustrates how humans can overwrite their biological moral intuitions. When one's socially learned intuitions override their biological ones, their morals may no longer be moral; thus we as humans cannot trust our moral intuitions.

Works Cited

Churchland, P. S. (2011). *Braintrust: What neuroscience tells us about morality.* Princeton University Press.

Dasgupta, N., & Greenwald, A. (2001). On the Malleability of Automatic Attitudes: Combating Automatic Prejudice With Images of Admired and Disliked Individuals. *Journal of Personality and Social Psychology*,– 81(5).– P. 800–14. URL: https://doi.org/10.1037//0022-3514.81.5.800.

Gregory, S., Ffytche, D., Simmons, A., Kumari, V., Howard, M., Hodgins, S., Blackwood, N. (2012). "The Antisocial Brain: Psychopathy Matters: a Structural MRI Investigation of Antisocial Male Violent Offenders". *Archives of General Psychiatry*,– 69(9).– P. 962–972. URL: https://doi.org/10.1001/archgenpsychiatry.2012.222

Haidt, J., & Joseph, C. (2006, December 21). "The Moral Mind: How five sets of innate intuitions guide the development of many culture-specific virtues, and perhaps even modules". In P. Carruthers, S. Laurence, and S. Stich, *The Innate Mind*,– 3,– P. 367–391.

Kramer, S. (2020, December 7). *Polygamy is Rare Around the World and Mostly Confined to a Few Regions.* Pew Research Center. URL: https://www.pewresearch.org/short-reads/2020/12/07/polygamy-is-rare-around-the-world-and-mostly-confined-to-a-few-regions

Mill, J. S. (1879). *Utilitarianism* (7th Edition). Longmans, Green and CO.

Pizarro, D. A., & Bloom, P. (2001). "The Intelligence of the Moral Intuitions: Comment on Haidt". *Psychological Review,*– 110(1).– P. 193–196. URL: https://doi.org/10.1037/0033-295X.110.1.193

Psychology Today. *Intuition.* URL: https://www.psychologytoday.com/us/basics/intuition

Tamborini, R., Hofer, M., Prabhu, S., Grall, C., Novotny, E. R., Hahn, L., Klebig, B. (2017). "The Impact of Terrorist Attack News on Moral Intuitions and Outgroup Prejudice". *Mass Communication and Society*,– 20(6).– P. 800–824. URL: https://doi.org/10.1080/1520 5436.2017.1342130

Tikkanen, A. (2019, June 28). Cannibalism: Cultures, Cures, Cuisine, and Calories. *Encyclopedia Britannica.* URL: https://www.britannica.com/story/cannibalism-cultures-cures-cuisine-and-calories

Wang, Y., Zheng, D., Chen, J., Rao, L., Li, S., Zhou, Y. (2019). "Born for Fairness: evidence of genetic contribution to a neural basis of fairness intuition". *Social Cognitive and Affective Neuroscience,*– 14(5).– P. 539–548. URL: https://doi.org/10.1093/scan/nsz031

Woodward, J., & Allman, J. (2007). "Moral Intuition: Its neural substrates and normative significance". *Journal of Physiology Paris,*– 101(4–6).– P. 179–202. URL: https://doi.org/10.1016/j.jphysparis.2007.12.003

Section 4. Political science

THEORETICAL CONCEPTS OF PUBLIC ADMINISTRATION AND KOSOVO CASE

Albulena Brestovci [1], Zemri Elezi [1]

[1] South East European University

Abstract

The paper gives an insight about the understanding of public administration under Kosovo developments and the practical developments of Kosovo public administration from the post war period until the current times. Author with the paper gives explanations about the concepts of public administration from various authors from both, theorical aspects and form the practical developments of it. For the needs of the paper, the combined methodology is used followed by following methods: method of legal analysis, method of comparison analysis, method of political analysis and method of linguistic analysis. The main aim of the paper is description of understandings of basic concepts and the development of public administration through different phases of its development—-from the international civil administration in Kosovo, to Kosovo independence and the new trends of its development in the spirit of EU integrations. Paper is expected to be important component of academic debate in Kosovo which will be further enriched and on the other hand it will serve as a means to be used by practitioners.

Keywords: *public administration, Kosovo, reform, concepts, development, academic*

Introduction
Public Administration

Public administration represents institutions of state bureaucracy, it has to do with the public institutions, organizative structures that contain basis of decision making and implementation of decisions as well as rules according to which public services are exercised (Azizi, Aziri, & Elezi, 2009, p. 11).

We can define public administration as execution of public policy which is determined by representative organs, respectively we define it as a collection of public services that ensure realization of important duties for the state in order to realize the public utilities. Besides others there are understood other organs that exercise administrative work (Pollozhani, Dobjani, Stavileci, & Salihu, 2010, p. 15). In order to realize the public utility, public administration ensures public services and performs important duties for the state, services which include education,

public security, infrastructure maintenance, transport, health, and other services.

A group of authors related to public administrated stated

"Public administration in many aspects is a chameleon, it differs its colors depending on its environment. In real world, it advice politicians, helps in drafting policies and is essential in implementing in various levels of governance" (Hustedt, Radma-Liiv, & Savi, p. 129).

Public administration is as old as the civilization is, with the bureaucracies that serves as the main governing institution and administration since ancient times (Farazmand, Bureaucracy, administration, and politics: An introduction, 2009, p. 1).

Public Administration is old similarly to civilization

Public administration is as old as human civilization and both existed side by side contributing in development and failure. Development of administration was a component of historic administrative traditions and in fact development of administration was a flourished field. Administration and civilization existed side by side and fed each other and both were component parts for human advancement because. This because they made it possible civilization achievements and they made it clear the overview in the human history which quite clearly reveals the importance of public administration in increasing civilization and achievements in the entire globe (Farazmand, Development and Comparative Public Administration: Past, Present, and Future, 1996, p. 333–337).

Public administration has been a historic component of traditions and it has played an important role in the developments of societies. Whereas civilization made process of human advancement in the cultural, social, political and economic aspects.

In fact, literature of public administration has a bunch of resources and studies which include different aspect of public administration. As an independent field it is dedicated to analysis of structures, processes, policies and performance of administration in various levels of governance.

Public administration literature, like other fields is very rich and it involves a broad specter of themes and perspectives that have to do with the theories and models of public administration; management of human resources and finances; analyzing of public policies; control and accountability; modernization of public administration and many other themes.

Administrations systems were "personal"

Previous systems of administration have an important common characteristic. They were "personal" which means that they were based in the loyalty upon a specific individual like king or minister in a country, instead of being "impersonal" based on legality and in the loyalty in the organization and in the state. Their practices often resulted in corruption or in misuse of function for personal benefits. Aforetime it was common for those who aspired employment by the state, to use patronage or nepotism for employment by buying offices and the right to work. In USA during the most of XX Century there existed the loot system of administration and only after the elections which brought the other party into the power, every administrative work from top to bottom could be fulfilled by a nominee by the wining political party (Rosenbloom, 1983, p. 18).

In previous systems the practice of nepotism and buying of positions were common, however by passing the time these practices changed. Now, modern systems of administration are oriented towards legality, competition that are based in the merit and political neutrality. Whereas, today. Systems of public administration aim to be independent from the political influence, based on clear principles and defined procedures, giving more importance to the legality, meritocracy and professionalism. Gladen claims that public administration has to do with the activities of government and that the word administration means to care for people; to manage their work and an administrator is a servant and not a God (Thornhill & Dijk, 2010, p. 101).

Wilson in his 1887 article said that the way of rising of administration should be done in such a way that it is in the interest of public servant to serve, not only to serv the supervisor but also to serve community. One his suggestion was that administration should

be structured in that way so administrators are held responsible for their acts (Clements, 1998, p. 324). On the other side, meanwhile Waldo explains that Public Administration is at the same time a field of research and an activity which means that in order a theory to exist, it should describe and explain borders of research as determined by activity itself (Thornhill & Dijk, 2010, p. 101).

Perfection of the administration is achieved in a public service regulated in the hierarchic way and trained professionally whereas effectiveness is achieved be perfectioning hierarchic order of a public service trained professionally (Ostrom & Ostrom, 1971, p. 204).

Principles and standards derive from legislation

Principles and standards of a good public administration derive from legislation and jurisprudence of EU and good administrative procedures of its members. These are principles which offer guidelines to policy makers towards EU membership and toward cross border cooperation.

Main challenges of good administration were the respect for the rule of law and predictivity, whereas additional challenge of good administration was the answer on radical social, cultural and economic changes which happened during the last decades that mainly touched countries in transition and potential countries for EU membership.

We have a good administration eve then when the accountability and control are enabled; documentation of steps and procedures undertaken in their registers including all requests and applications, evidences and other relevant documents for administrative procedures... And then, when we have good and effective administration, since public authorities should be successful in achieving their aims, the treatment of public problems regulated by law and by government-so the it should not be burdened with the unnecessary cots and charges upon citizens and businesses is one of the best ways to achieve efficiency and effectiveness (OECD, SIGMA, & Eoropean Union, Cheklist for general law on administrative procedures, 2005, p. 7–9).

In the function of clear development of the right to good administration in Europe a recommendation from Council of Europe came which oriented towards activities in the field by drafting a new legal instrument. This recommendation has a broad range since it is implemented for all public administrations and in their relationships with the private persons. By proposing a "good administrative code" recommendation unifies rules which were disbursed and diverse by enabling of a model of administrative organizing which is efficient and rational in accordance with the rules that should be used by all administrations (Counsil of Europe, 2007, p. 15).

Public administration is an interdisciplinary field which is based in diversity of approaches and discipline values. There exist disciplines that form the basic foundation of the field except the traditional managerial emphasize over the efficiency and effectiveness; the field of public administration is impacted a lot by representation nature and reaction of political system as well as by the underlining of legal system over the rights and social equality (Wright, Public Administration as an Interdiscipinary Field: Assesing Its Relationship with the Fields of Law, 2011, p. 96).

Effective and efficient administration includes management of public management; it promotes and strengthens democracy and good governance. There was a civils service functions it is essential to ensure that democratically elected officials are able to protect citizens rights and to mobilize respective resources in that way to pay for offering services (Cheema, 2007, p. 29).

Providing qualitative services and the use of good needed resources creates a suitable environment for good governance that contributes in improving the life's of citizens of that country. Public administration should be oriented towards maximization of efficiency and effectiveness and the economy (Rosenbloom, 1983, p. 220).

Public administration hardly accepted by other disciplines

Public administration is approved by hesitance as the science by other scientific disciplines in social sciences. It is public administration that studies human beings that are engaged with the administrative and managerial duties in state organs and therefore every study should pay attentions to the

behavior and activities in an organizative environment which operates in a political environment. Public administration as an applied science should connect every theory with the practical situations within which the administration is practiced (Thornhill & Dijk, 2010, p. 95–97). Connection of theory with the real situations and application of accountable methods to analyze, direct and improve administration gives importance to understanding and practicing the administration. Public administration science was born at the end of XX century, when the state business start to attract socio-academic attention. Revolution that transforms public administration into a science and into independent profession has to do traditionally with the work and the essential vision of Woodrow Wilson and Frank Goodnow (Vigoda, 2002, p. 36).

These two researchers helped the rise of public administration into an independent field of study. They have determined the essence of public administration by giving special importance to organizing and management and the implementation of public policies and they have stressed out the need for professionalism, for responsibility and concentration in providing services for citizens.

Strong evidence that public administration became heavy scientific for over more than 70 years since the critics of Dahls who came up with two proposals related to the public administration as science:

First, it is reasonable to valuate the status of public administration as science based in its ability to decide universal principles and.

Second, public administration is qualified as science and even though a considerable space for improvement remains and that there was a considerable progress in use by using process and scientific methods.

Dahl also has identified 3 problems that characterize study of public administration and they are normative values – whose importance could be seen at the individual level and at the group level. Studies of the individual level have investigated important roles that values play in impacting behavior of public workers in decision making, those of the group level have investigated values that direct public act and determination of public interest. It is important to stress out that progress has been made in the importance

that save values in disbursing and evaluating government policies and programs (efficiency, effectiveness, transparency and accountability); human behavior – where status of public administration should derive and contribute in a sense of human behavior within itself and it doesn't conflict necessarily with the administrative management and with the request for universal behavior. Dahl augmented that behavior is very changeable and that factors that impact behavior are broad and complex.

Normative values and Public Administration as science

Studies of individual and group level have discovered how values impact in the process of decision making and in achieving the goals of public administration, and also the understanding of human behavior and the impact of socio-cultural factors have an importance in the field of public administration as well.

Thus, in order to improve the status of public administration as the science it is important to continue investigation and to develop scientific methods as well as to evaluate impact of social and political context in the field of public administration.

Comprehensive overview of administration contains public functions of administration, functions of generic nature because of universal implementation which also reciprocally involved that together contain effective and efficient functioning of public service (Thornhill & Dijk, 2010, p. 102).

Some authors of public administration have considered in phases the role of control of power; others have been critic against it and have seen it as an obstacle for development of legitime and strong state.

Wilson (1956) saw the division of powers as the constitutional handicap that hindered efficient acts of the government. He argued that "the federal government lacks power because its power is divided; it lacked speed because its authorities were multiplied, it lacked ability because its processes are without respective direction" (Terry & Spicer, 1993, p. 244).

Links which are made between research, teaching and practice are strong and give to the field a live spark. It is public administration that gains respect within the academic community, however it faces an increasing

problem on improving of a practice side (Kettl, 1999, p. 128).

Author Bauer emphasizes some of the important changes on the goals of administration and political sciences, first -it is a multidisciplinary effort focused in the applied research whereas second, aims to advance our theory knowledge directed towards our research.

In political sciences the study of democracy, power and legitimacy is the essence of grant disciplines, for example, how the democracy functions? How the maintenance of power and political actors is held and how the governance is exercised? whereas main questions which have a monologue in the grant of public administration are: which is the role of bureaucracy? Who is in the situation to impact decisions in the governmental apparatus? How the responsibility relationships in the different contexts and for different actors? (Gulick & Urwick, Papers on the Science of Administration, 1937, p. 133,134).

Public administration as the research field, time after time has taken into consideration the history of political and social thought for penetration. In fact, a lot of earlier authors of the public administration showed a vivid interest for this topic whereas last years a number of modern authors have demonstrated that a historic examination of political and social thought could be important for studying and for the practice of modern public administration, but however for at least some authors it remains tendency of minimizing importance of the history of political-social ideas on investigating public administration. Tendency for minimizing importance of political-social ideas in investigating public administration exists but on the other side history of socio-political ideas on investigating public administration is necessary and obligatory for studying and practicing public administration (Spicer, 2004, p. 353, 354). Cameralism was a school of economic-social thought within Prussia of XVII century which was developed in order to reform society. Lorenc von Stein who was a professor in Vienna, since 1855 is considered to be the founder of science of studying public administration in Europe. According to the opinion of Von Stein, science of public administration is an integrative science. He considered the public administration as

practice but theory should create the basis of this study and also, he argued that the science of public administration must try to approve a scientific method for studying. After 1945 year, ideas of previous authors were being doubted. Initially, the difference between politics and public administration was strongly relativized, but the debate however continued. Because of the various political scandals in US, public administration had to separate from politics and thus efforts were made to study public administration as it was composed of clear scientific forms which should be followed so they could get efficiency and effectiveness, but nonetheless every effort to deny political environment in studying public administration failed because public administration has to do with the human beings who act in a specific environment but which is politically led (Thornhill & Dijk, 2010, p. 99, 100).

Herbert Simon with his essay from 1946 "proverbs of administration" accused public administration as it had contradictory and conflictual theories and it had a lack of the basis of knowledge which could ensure guidelines for practice. He proposed that public administration to determine concepts, to approve effectiveness as its objective, to be focused in study of decision making and to build models that may foresee efficient models. Simon proposed that public administration must generate clear concepts, to review determinants of effectiveness, to focus in decision making and to evaluate how various factors impact the effectiveness.

Progress made in the public administration in these dimensions:

1. Generation of clear concepts
2. Determinator of efficiency
3. Decision making
4. Weighing of factors that impact in effectiveness (Meier, 2015, p. 15; See more: Meier, Kenneth J. "Proverbs and the Evolution of Public Administration." *Public Administration Review* 75, no. 1 (2015): 15–24. http://www.jstor.org/stable/24758021. fq. 17, 18).

Public administration is evaluated by Simon as a science upon artificial and which is focused in the way how things could be and how they are in reality. He also stressed out that if we like to improve this situation of

public administration it will be necessary to require two goals: that of science quality and of practice importance.

As it is for the first factor, public administration is focused to address those needs and in developing policies and programs for growing economic development. Regarding the second factor, that of changing of needs of countries in development and the developed ones, public administration is adapted to treat changes, requests and challenges of various societies by taking into account local and global context. In the third factor has made efforts to be developed in the organizative, managerial and technological aspects in a way of improving performance and its effectiveness.

Public administration regarding the transfer of development and technological knowledges has gained experience and learned lessons from the developed countries regarding practices and methodologies of the public administration, by making efforts to apply them in their national context. Regarding the fifth factor, public administration was adapted depending in specific conditions of every country taking into account political, economic and cultural context to develop good policies and practices. Whereas, regarding the last focus, public administration has looked towards developed nations and took resources of lessons and good examples to be followed for what it has made effort to apply so it achieves the desired development.

As a multidisciplinary field, public administration has its roots in a number of disciplines of social sciences, where public administration borrows theories and methods, which unifies public administration is its subject, public sector and public sphere, not goals, theories and methods. Within universities in the entire globe public administration refers to academic research and teaching and sometimes advices fort policies, which consider public administration in the real world as the object of study (Hustedt, Radma-Liiv, & Savi, pp. 129, 131, 132).

Public administration is a field which has interaction with various disciplines and as such uses theories and methods of these disciplines, but the main focus is in studying and analyzing the public sector and in improving of functioning of public administration and giving contribution in policies and in the public reforms.

Regardless of basic similarities, public administration of our time is an organization quite different from public services from the past, it is bigger than ever before and it is being broadened, it is more complex than it was in the past, it has responsibility for citizens and it should still should meet the requests of citizens, it is gaining more rights but it should more than ever to keep its functioning and to respect standards of equality, social justice and especially accountability (Vigoda, 2002, p. 2).

Nature of administration has been studied also by sociologists as one of many social structures. Lately the socio-psychologic school of behaviorism has given great contributions in order to understand the way of why officials and public employees act as they act and all of these have important approaches and form all of these come understanding and wisdom (Storing, 1965, p. 49, 50).

Public administration, today, is quite different from public services in the past. Surely, many historic functions of public administration as collection of information, data retention and implementation of laws continue. A new public management is relies upon traditional public administration; science was applied in theory and in practice in a broader concept of administrative management (Caldwell, 2002, p. 151, 152).

That what is known as traditional public administration whose start was in Great Britain in XIX century, sometime in the past it was called big reformation movement. There where amateurs linked with personal loyalty related to their supervisors exercised functioning of public administration; duty became a profession which was done by special public service based in merits. Service at that time was a high call that require from the best disposable people to create a special administrative elite to act always in accordance with the law and the established precedents. Politicians may come and go, whereas government apparatus was in the hands of permanent officials and that the transition between regimes could be treated normally.

Traditional model

Traditional model of administration remains to be the most successful theory of management in the public sector, but this theory has been replaced in many countries

from 1980 year because of not good functioning. Political leaders and communities considered services as weak, related in the process and out of contact with the reality. As a conclusion we could say that this model was successful and imitated broadly from governments in the entire theory as well as in practice and it had its good points and it compared with the previous forms which were full of corruption was more efficient and that the idea of a professional service was big improvement from personal or amateur (Hughes, 2012, p. 15, 17, 43).

Traditional model of public administration which dominated the biggest part of XX century changed in the mid of 1980 in a form of public management based in a flexible market and that this is not simply an issue of reform or a small change in the managing style, but it is change in the role of government in society and relations between government and citizenry. Termi public administration always referred a study of public sector except it was an activity and a profession. Public policies, public administration and public management are terms that refer to the same thing, which is the way how administrative part so governments are organized, treat information and produce results in policies, in laws or goods and services (Rosenbloom, 1983, p. 15).

If public administration is to be developed as profession, there are some conditions to be present: theoretic, scientific and technical basis, training in the theories in the techniques of administration, "a call to serve", attitude about individual recruited in profession, an institutional network and the exercise of control over practice (Waldo, 1988, p. 930).

Challenges met by public administration will not be reduced. Quite a contrary tendency which we have seen to have appeared happened to lead towards radical changes in the duties that public administrators address and as a consequence the way how they act. As a consequence, radical changes will also be necessary in the ways they are educated and naturally these changes will cause consequences in the research agenda (Bovaird, 2002, p. 350).

Author Finer says:

"Administration starts there where legislators declares that the separation of administrator will start".

Dichotomy became a theory of public administration and it became a normative guide for professionals of public administration. This school is characterized by the efforts it made in order to distinguish public administration from politics with the main values which lead public administration from politics including hierarchy, neutrality and expertise and wish altogether form a feature that is determinant for the public administration. Attention in this school has been paid to the bureaucratic expertise. This school was not free of strong critics because of the normative voids and empirical accuracy.

The second school of division is political school which includes concept of political public administration. Arguments of this school underline and support a broad inclusion of administrator in all phases of political process and which is characterized by the total refusal of sharp division between politics and administration. For this school public administration is an un divisible part of governance and it is impossible and not desirable to be achieved even if only there is partially a division between them.

It is author George Fredersicson who in 1971 threw down totally principle that public administration should be under the political leadership (Demir, 2009, p. 524).

Dichotomy politics-administration refers to partisan political activities division from civil administration, especially in procedures for nominating civil officials. In such systems which is followed in Commonwealth, the roles of legislative and executive branches are combined in a person of elected minister and that the powers are divided by saving independence and the mandate of the chief of civil department who gives "sincere and fearless" advices for minister. Defenders of American systems argue that a government of a coming government should bring persons that could be trusted in high positions if they will implement the agenda for reform whereas systems of Westminster argue that trust, stability and effectiveness increase if a government know that its officials have no partisan accesses (Shultz, 2003, p. 331).

The third school is the school of interaction which in some way represents different efforts to find a joint basis between political and the school of division. This represents a

series of ideas that underline the cooperation between officials who are elected and administrative officials by saving traditional rules and unique perspectives of each of them.

What differs this school from the political school is a clear being of the issue of extension and inclusion of the administration in politics.

There are three suggestions regarding the use of schools:

1. School of division could help in isolation of public administration from political impact and that such a need could appear in specific circumstances and that this school is necessary in takin elected officials and administrative official to cooperate in such unsecure cases and complexity could impose mental actors to interact and to cooperate for duties which are not routine, whereas political school could help in a better use of politics to fulfil social and political goals.

2. Researchers of public administration should continue efforts to produce empiric hypothesis which are testable and that reflect important proposals of all three schools and that shall evaluate these hypotheses with empirical data all the time this is possible and suitable.

3. Third proposal includes conceptual and theoretical models that explain relationships politics-administration which should communicate between themselves clearly and openly. Public administration researchers could test specific pretentions of a model in the field of the other model and then see how the other model respond to these claims (Demir, 2009, p. 524).

Among most important functions are: development of human resources, protection of human rights and political freedoms, security, health and wellbeing, creation of social capital by strengthening civil society, environment protection, mobilization of financial resources for development, creation of partnerships and cooperation in the private sector and NGO for providing services, democratization of government, ensuring and facilitation of physic and technological infrastructure and enabling the development of private sector, whereas means to strengthen public administration are: constitutional, electoral, governmental, administrative and public service reforms (Rondinelli, 2007, p. 1, 4, 17).

Another important aspect is expressed displeasure by citizens in many countries with the government functions and services offered by public administration, displeasure that initiated request for improving governance and public administration and at the same time increase capacities of state to exercise its roles and functions.

In one of most important functions of public administration include also development of human resources, protection of human rights, public security, health and wellbeing, strengthening of civil society, cooperation between private sector and NGOs, mobilization of financial means for development, support of private sector, etc.

Author Xhabbir Cheema sees the concept of public administration in last 50 years to have passed through four phases. Historically public administration has been precepted as a group of state structures, institutions and processes which are characterized apart of other features by hierarchy, continuity, impartiality, standardization, legal-rational authority and professionalism. It was supposed to guarantee human security and protection of property, to set up and implement social standards and to support the rule of law.

Second phase of public management was focused in implementation of management principles by including efficiency in using resources, effectivity, orientation towards clients, relying in market forces and bigger sensibility on public needs. Call was issued for expanding the role of private sector respectively minimizing the size of public sector and the field of traditional public administration. In this phase efforts were made so the principles of private sector to be used in the public sector.

Third phase represent new public management which continued previous trends. It was focused in partnerships oriented towards results between public and private sector in offering services for citizens. Foreseen principles are: principle of flexibility in giving possibilities to managers to face continual changes in the national and global environment; empowering citizens to promote efficient entrepreneur management and oriented towards results by including "direction and not driving; new mechanisms of responsibility that overcome mechanisms of com-

patibility to ask for innovations and results during processes; bringing in principles of business in public work including external resources and contracting; promotion of professional ethics in the sphere of public and management of performance and budgeting.

Fourth phase presents governance which is determined from a system of values, politics and institutions with what a society administers economic, social and political issues through interaction within state, civil society and private sector. It (phase) includes mechanisms and processes to whom citizens and other groups could express their interests, to mediate in their change and to exercise the rights and duties. There are three factors involved in governance: state-who creates a suitable political and legal environment, private sector who generates incomes and civil society who facilitates social and political interaction (Cheema, 2007, p. 30, 31).

In his studies Leonard D. White about the administration, he supposes that the study of administration should start from the basis of management rather than from its foundation in law and this confirms that what was seen to be an implication of the first supposal that the unity in the process of administration excludes a division between public and private administration, since it excludes a distinction between federal administration, state and municipal one. Other supposal of White (administration an art in transforming into science) says that since administration is still an art, there exist a considerable tendency to transform it into science.

Fourth (his) supposal about the administration as a central problem of modern governance stays in that, that administration has become and continues to be the heart of modern governance, exactly the administration which is essentially nonpolitical is the heart of the problem of the modern governance (Storing, 1965, p. 40, 43, 46).

Science or art

Is the public administration an art or science? Answer in this question has a great importance for state building, because good public administration is key for an effective government. If public administration, organization and management of individual public agencies is a science then study of good public administration and the raise of competent public agencies is going to be problematic.

The lack of valuable global regulations for drafting and the organizative management means that public administration will be more an art and less as science and this means that the best solutions fort problems of public administration, even though it has some features of institutional design will not be good and clear practices because those should include a considerable quantity of specific information about the context (Fukuyama, 2004, p. 189).

In fact, public administration could be considered as a combination of both aspects, of science and art which faces complex challenges and efforts implement knowledges and different methodologies.

Elements of science are found when we see it from the organizative aspect and management of public individual agencies because there exist theories, models and developed methods to address challenges of managing the public institutions. Social sciences, as it is public administration and other branches offer theoretic basis and analytical instruments in order to understand and treat administrative phenomenon and however, in every day practice of public administration, there are other factors who impact decision making and activities of public administration. Therefore, in order to improve public administration, it is necessary to combine the elements of science and art. Study of administration as science ensures the part of theoretic basis and other methodologies, whereas implementation of an artistic ability in treating concrete administrative challenges could bring to the innovative effective solutions.

Efforts for creating a science of public administration has often led to the creation of universal laws or even more often ascertain that universal laws could be formulated for public administration.

On the efforts of making science of public administration similar to science of nature, laws or supposed laws are stripped of normative values, of caused distortion, of individual unfixed psycho and of not important supposed effects of cultural environment.

A statement with equal impact is that of L. Urwick that "there are determined principles which regulate association of human

beings for every goal, as there are determined principles in other fields".

Others simply argue that it is possible to reveal general principles of broad validity even though not necessarily, but however investigation of these more limited principles is unable based on three problems of values, of individual personality and of the social cadre.

Sciences as such do not dela with the investigation or with explanation of normative values and indeed general doctrine, if not in universal way, it is accepted that science cannot demonstrate moral values, that science cannot build a bridge beyond a big gap from that "what is" to that "what it should be".

Most problems of public administration are around human beings, study of public administration in essence is the study on human beings as if they have behaved as expected or as foreseen – how could behave under the determined circumstances. What identifies if the field of publica administration from psychology or sociology or even from politics in institutions is its concern about the behavior of people in the exercised services from mindful agencies of government and that this concern regarding human behavior limits a lot immediate potentials of a science of public administration.

No science of public administration is possible if the place of normative values has not been made clear, nature of people in the field of public administration is understood better and that his behavior is more predictable, if a group of comparative studies exists from what it would be possible to reveal general principles that overcome national borders and specific historic experience (Dahl, 1947, p. 1, 2, 4, 7, 11).

Therefore, comparative studies have an important role in developing science of public administration because through analysis which could be done, by comparing institutions, policies and administrative practices of various countries we could take out principles and general lessons which are valuable beyond borders.

Administrative activity is a product of a complex administrative system loaded with offering services with the intentions of undertaking aimed acts in ensuring wellbeing of citizens as well as in cultural development and economic advancement.

Current public administration requires sustainable instruments to keep it as dynamic and functional. Administrative theory and practice should be symbol of transformation in line with development and new reforms in public administration. Modern concepts of administrative system rely in a complex and dynamic system of human interaction. Public administration is a symbol of good governance through the process of transformation of public services and that this governance requires efficiency, effectivity and transparent administration which could be achieved through public officials who are capable for planning, organizing, coordinating and managing of administrative activities.

As a part of transformation of public administration is considered also by citizens as a good factor to impact decision making in public sector, however in most countries citizens are skeptical regarding their participation in decision making since they consider the process of transformation of public administration a something irrational and less effective; in this regard citizens feel that they do not have impact in the problems that tackle them directly or indirectly. Therefore, it is of big importance to improve the participation and inclusion of communities in the activities of public administration in order to make it easier the process of transforming the public sector. (Batalli, Factors Affevting the Transformation of Public Administration, 2016, p. 32, 39, 40).

Administrative sciences, in order to fulfil these requests should be open for reforms and new developments; should expand knowledges and deepening of understanding of meaning of public administration under new circumstances in society, which would help improvement of performance and will ensure effective and transparent governance at all levels of a state.

As a continual process, innovation of administration includes decentralization of public administration, simplification of procedures, informatization of offers for services as well as improving the development of human resources (Batalli, Impact of Public Administration Innovations on Enhancing the Citizens' Expectations, 2011, p. 156).

In order to follow the process of Europeanization in many countries, the main chal-

lenge and a big chance is creation of a sustainable, efficient, transparent, independent and professional administration. Nonetheless, in every field of life there are created public administrations.

Kosovo Public Administration

Kosovo Public Administration involves a group of governmental institutions and organizations that have different administrative responsibilities in serving citizens and businesses. Some main organs with the administrative responsibilities are ministries, government agencies, municipalities, independent institutions and the organs of control.

Ministries are the main institutions of executive power in Kosovo. Each ministry is responsible to manage and to implement policies and laws in specific fields as: education, health, finances, etc. They are responsible to draft policies, to monitor performance and to offer services within their own competences.

In Kosovo there exist a series of governmental agencies and independent institutions that have specific responsibilities in various fields.

An important level of public administration of Kosovo represents municipalities who are responsible to offer local services and to develop their communities. They help on generalization and implementation of central policies in the local level and in meeting the needs of citizens within their communities. Whereas the organs of control are responsible to control and evaluate activities of the public administration, guaranteeing accountability and transparency.

Public administration in Kosovo is responsible to implement public policies, to offer public services and to manage issues of administration at the central and at the local level. It includes a broad specter of governmental institutions and organizations who hold various responsibilities for functioning of state and for fulfilling the needs of citizens and the businesses.

Public Administration in Kosovo aims to ensure good governance, efficiency and accountability in providing services. It should act in accordance with the law, it has to be transparent, to respect the rights of citizens and to promote social and economic development of the country. In order to achieve these goals, Kosovo Public Administration should work on harmonizing with the EU, to strengthen capacities of employees, to use information technology when communicating in that way to improve administrative processes and to promote accountability and responsibility on implementing policies and providing public services.

Summarizing, we can say that the public administration in Kosovo has various functions and responsibilities in implementing public policies; in offering public services and in managing administrative issues. Development and implementation of public policies is one of the main responsibilities of public administration that includes drafting strategies, planning of policies, monitoring and their implementation and evaluation of achieved results. Other function of public administration is offering of needed public services for citizens and businesses, for what public administration should make sure that they are accessible, qualitative and are able to fulfil needs of citizens.

Public administration has also the responsibility to regulate and to implement laws in the country, including drafting of administrative regulations, implementation of laws, monitoring implementation and following the procedures. Public administration should ensure that laws are being implemented in a lawful way and it can undertake investigations when necessary if this is not being respected.

In addition, public administration in Kosovo is responsible to manage human and financial resources, including recruitment and training of employees, budget planning, financial control, administrations of salaries, etc. It should ensure efficient and transparent management of resources in order to realize its goals and its responsibilities. Other responsibility of the public administration is communication and cooperation where public administration is responsible to communicate with citizens, with the civils society organizations, with the businesses and other institutions. This includes information, receiving of requests and citizens complains, organizing public consultancies and creating partnerships for sustainable development.

Conclusions

Public administration even though it exists over the centuries, in the way it is learned and studied now, it is quite a new science in social sciences. In the last century it has quite a different physiognomy. The dichotomy between politics and the administration remains to be an issue to be more resolved by scholars and researchers. But the thoughts of Wilson and Von Stein are a good basis for further studies. Many questions have to have answers regarding the public administration as science and as the practice as well as there are still clear answers to be found on understanding of public administration formally, materially and so on.

Kosovo public administration has gone through various phases of its development. Since the Declaration of Independence, Kosovo administration is built upon its constitution which was adopted right after the Declaration of Independence.

The current administration is being developed with all of the efforts to respect requirements of EU integration. On the other side as a subject, it is taught in different colleges and universities and this shows that it is important also as a study discipline and not only as the practice in the field.

References

Azizi, A., Aziri, E., & Elezi, Z. (2009). *Fjalor shumë dimensional i termave dhe shprehjeve administrative, politike, sociale dhe të diplomacisë*. Shkup: Vatra.

Batalli, M. (2011). Impact of Public Administration Innovations of Enhancing the Citizens` Expectations. *International Journal of e-Education, e- Bussines, e-Managment and e-Learning*,– P. 156–162.

Batalli, M. (2016). Factors Affecting the Transformation of Public Administration. *Juridica*,– P. 31–43.

Bovaird, T. (2002). Public management and governance. In E. Vigoda, *Public Administration, an interdidciplinary critical analysis* (P. 345–376). New York: Marcel Dekker.

Caldwell, L. K. (n.d.). Public Administration- The New Generation. *Marcel Dekker*,– P. 151–176.

Cheema, S. G. (2007). Linking governments and citizens through democratic governance. *ESA*,– 29.

Clements, K. A. (1998). Woodrow Willson and administrative reforms. *Wiley*,– P. 320–336.

Counsil of Europe. (2007). *Recommendation CM/Rec(2007)7*. Strasburg: Council of Europe.

Dahl, A. R. (1947). The Science of Public Administration: Three Problems. *ASPA*,– P. 1–11.

Demir, T. (2009). Politics and Administration: Three Schools, Three Approches, and Three Suggestions. *Administrative Theory&Praxis*,– P. 503–532.

Farazmand, A. (1996). Development and Comparative Public Administration: Past, Present, and Future. *Public Administration Quarterly*,– P. 343–364.

Farazmand, A. (2009). Bureaucracy, administration, and politics: An introduction. *Taylor&Francis*, 1.

Fukuyama, F. (2004). Why There is no Science of Public Administration. *Journal of International Affairs*,– P. 189–201.

Gulick, L., & Urwick, L. (1937). Papers on the Science of Administration. *Institute of Public Administration*,– 132 p.

Hughes, E. O. (2012). *Public management & administration*. Palgrave Macmillan.

Hustendt, T., Randma-Liiv, T., & Savi, R. (n.d.). Public administration and disciplines. *Leuven University Press*.

Kettl, D. F. (1999). The future of Public Administration. *Journal of Public Affairs Education*,– P. 127–133.

Meier, K. J. (2015). Proverbs and the Evolution of Public Administration. *American Society for Public Administration*,– P. 15–24.

OECD, SIGMA, & Eoropean Union. (2005, October). *Cheklist for general law on administrative procedures*. Retrieved from Sigma: URL: http://www.sigmaweb.org/publications/37890936.pdf

Ostrom, V., & Ostrom, E. (1971). Public Choice: A Different Approach to the Study of Public Administration. *ASPA*,– P. 203–216.

Pollozhani, B., Dobjani, E., Stavileci, E., & Salihu, L. (2010). *E drejta administrative, aspekte krahasuese*. Shkup: Tringa.

Rondinelli, D. A. (2007). Governments serving people: The Changing Roles of Public Administration in democratic governance. *7th Global Forum on Reinventing Government* (P. 1–28). Vienna, Austria: United Nations.

Rosenbloom, D. (1983). Public Administrative Theory and the Separation of Powers. *ASPAI*,– P. 219–227.

Spicer, M. (2004). Public Administration, the history of Ideas, and the Reinventing Government Movement. *American Society for Public Administration*,– P. 353–362.

Storing, H. J. (1965). Leonard D. White and the study of Public Administration. *ASPA*,– P. 38–51.

Terry, L. D., & Spicer, M. W. (1993). Legitimacy, History, and Logic: Public Administration and the Constitution. *American Society for Public Administration*,– P. 239–246.

Thornhill, C., & Dijk, G. (2010). Public administration theory: Justification for conceptualisation. *Journal of Public Administration*,– P. 95–110.

Thornhill, C., & Dijk, G. V. (2010). Public Administration Theory: Justification for Conceptualisation. *Journal of Public Administration*,– P. 95–110.

Vigoda, E. (2002). *The legacy of Public Administration*. New York: Marcel Dekker, INC.

Waldo, D. (1988). Review: The End of Public Administration? *ASPA*,– P. 929–932.

Wright, B. E. (2011). Public Administration as an Interdiscipinary Field: Assesing Its Relationship with the Fields of Law. *American Society for Public Administration*,– P. 96–101.

Contact: ab29087@seeu.edu.mk: z.elezi@seeu.edu.mk

Section 5. Psychology

UNMASKING RISK FACTORS OF BULLYING BEHAVIORS AMONG ADOLESCENTS IN SCHOOLS USING LOGISTIC REGRESSION

Yixuan Yang [1]

[1] Shenzhen College of International Education, China

Abstract

The bulling behaviors among adolescnets has become a serious issue in the United States. According to the U.S. Department of Education's National Center for Education Statistics (NCES), one out of every five (20.2%) students report being bullied at school and 41% of students who reported being bullied at school indicated that they think the bullying would happen again.

In this research, we investigated possible risk factors for bullying behaviors at school among adolescents and identified the most significant positive and negative factors through logistic regression. We used the 2021 Adolescent Behaviors and Experiences Survey data with features ranging from demographic information to the adolescents' family condition. The response variable is whether an adolescent has been bullied at school during the past 12 months.

After processing the dataset, we built a logistic regression model to predict whether an adolescent is likely to be bullied. By investigating the logistic regression coefficients, we found that parents' attitude toward the adolescent, gender, race, and the adolescents' relationship to people at school are all risk factors. Specifically, we found that female white adolescents are more likely to be bullied at school. The logistic regression model has achieved an AUROC score of 0.74, with 62.1% true positive rate (TPR) and 30.9% false positive rate (FPR). This predictive model is helpful for healthcare professionals to identify and reduce the risk for the adolescents that are prone to be bullied and thus developing mental health related issues.

Keywords: *bullying behaviors, model to predict whether, risk factors, family member's attitude toward the adolescent, difficulty in concentration*

1. Introduction

Bullying is unwanted, aggressive behavior among school aged children that involves a real or perceived power imbalance. Nowadays, the bulling behaviors among adolescnets has become a common yet serious issue in the United States. According to the U.S. Department of Education's Nation-

al Center for Education Statistics (NCES), one out of every five (20.2%) students report being bullied at school and 41% of students who reported being bullied at school indicated that they think the bullying would happen again (National Center for Educational Statistics. 2019). In addition, bullying behaviors can have serioes impacts on adolescents' development. According to NCES, students who experience bullying are at increased risk for depression, anxiety, sleep difficulties, lower academic achievement, and dropping out of school, and those who experience bullying are twice as likely as non-bullied peers to experience negative health effects such as headaches and stomachaches (National Center for Educational Statistics. 2019). Therefore, it is of great importance for healthcare professional to identify adolescents that are at high risk for being bullied at school and help address problems at an early stage. To fulfill this task, this report discussed the machine learning techniques that can be applied to build predictive models on whether an adolescnts will be bullied and meanwhile identified top risk factors associated with such behaviors.

Specifically, we pre-processed the dataset, built a logistic regression model, and investigated factors most related to bullying behaviors at schools among adolescents. We also measured the model performance using various validation techniques and analyzed the model coefficients to find the variables that contribute most to our predicted results.

2. Method
2.1 Data

We used 2021 Adolescent Behaviors and Experiences Survey (ABES) data for this study. The ABES is a 110-question online survey completed by US high school students in early-mid 2021. It is a national survey conducted by Centers for Disease Control and Prevention (CDC) that provides rich data on health-related experiences and behaviors among high school students and was designed to assess the impacts of the COVID-19 pandemic on adolescents. In addition, ABES is also the first nationally representative survey looking at the effects of the COVID-19 pandemic on the health of adolescents. The 2021 ABES data contains 7,705 complete data samples. We used the following variables as independent variables.

Table 1. *Features used for analysis*

Variable	Description	Comments
Q1	How old are you?	Range: 12–18
Q2	What is your sex?	0: Female, 1: Male
Q4	Are you Hispanic or Latino?	0: Yes, 1: No
Q5	What is your race?	0: American Indian, 1: Asian, 2: Black, 3: Native Hawaiian, 4: White
Q19	Have you ever been physically forced to have sexual intercourse when you did not want to?	0: Yes, 1: No
Q65	What's your sexual orientation?	0: Straight, 1: Gay or lesbian, 2: Bisexual, 3 or higher: others
Q66	How do you describe your weight?	Higher value indicates more over-weighted
Q101	During the COVID-19 pandemic, did any adult in your home lose their job?	0: Yes, 1: No

Variable	Description	Comments
Q103	During the COVID-19 pandemic, how often did you go hungry because there was not enough food in your home?	Higher value indicates higher frequency
Q105	During the COVID-19 pandemic, how often did any adult in your home swear at you, insult you, or put you down?	Higher value indicates higher frequency
Q106	During the COVID-19 pandemic, how often did any adult in your home hit, beat, kick, or physically hurt you in any way?	Higher value indicates higher frequency
Q113	Do you agree or disagree that you feel close to people at your school?	Higher value indicates stronger disagree
Q114	How often do your parents or other adults in your family know where you are going or with whom you will be?	Higher value indicates higher frequency
Q115	Because of a physical, mental, or emotional problem, do you have serious difficulty concentrating, remembering, or making decisions?	0: Yes, 1: No
Q92	During the past 12 months, have you ever been bullied on school property?	0: No, 1: Yes

The dependent variable is a binary feature coded as "Q92," which indicates whether the respondent has been bullied at school in the past 12 months.

2.2 Exploratory Analysis

A correlation graph is a primitive yet straightforward representation of the cells of a matrix of correlations. The idea is to display the pattern of correlations in terms of their signs and magnitudes by using visual thinning and correlation-based variable ordering. Moreover, the matrix cells can be shaded or colored to show the correlation value. The positive correlations are shown in red, while the negative correlations are shown in blue; the darker the hue, the greater the magnitude of the correlation.

The graph above shows that the dependent variable (has been bullied at school in the past 12 months) has the highest positive correlation with Q105, while having the highest negative correlation with Q115, indicating that family members' attitude toward the adolescent and the difficulty in concentration play a significant role in their mental health. In addition, we discovered that the variable Q103 and Q106 also have positive correlation with the dependent variable.

In addition, the correlation graph also provides valuable information regarding the relationship among features. For example, the correlation between Q105 and Q106 is 0.47, indicating that the two variables are significantly positively correlated and adolescnets whose family memebrs treat them badly verbally are also likely to beat them physically.

Figure 1. *Correlation among variables*

2.3 Statistical Method

2.3.1 Pre-processing

The data set is pre-processed in this step to improve both the training speed and accuracy. As most machine learning algorithms are not able to deal with missing values, all the data points with missing entries or invalid responses to the dependent variable are excluded from training and testing. In addition, as different features usually have remarkedly different value ranges, we applied the feature standardization technique to transform different features into comparable scales. This measure ensures that different features weigh equally in the training process. For each feature, its mean value and standard deviation are first computed as *avg(x)* and *std(x)*. Then each data point *x*

with respect to that feature is replaced by y_i calculated as:

$$y_i = \frac{x - \mathrm{avg}(x)}{\mathrm{std}(x)}.$$

Finally, the dataset is partitioned into two datasets for training and test purposes: the training dataset (70%) for model development and the test dataset (30%) for model test and validation.

As the distritbution of the positive class and negative class is highly unbalanced in the training set, we further appleid the over-sampling techniqeu to rebalnce the data. Over-sampling is done by randomly selecting samples from the minority class, duplicating it, and then putting back into the dataset till both classes are balanced.

UNMASKING RISK FACTORS OF BULLYING BEHAVIORS AMONG ADOLESCENTS

Figure 2. *Distribution of class in the training set*
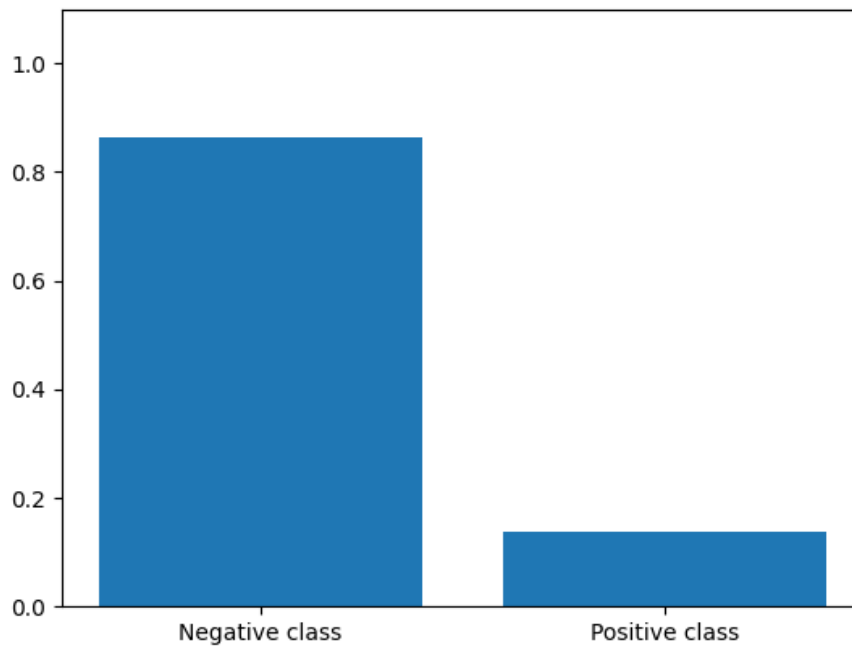
2.3.2 Logistic Regression

Logistic regression models were used to calculate the predicted risk. Logistic regression is a part of a category of statistical models called generalized linear models, and it allows one to predict a discrete outcome from a set of variables that may be continuous, discrete, dichotomous, or a combination of these. Typically, the dependent variable is dichotomous, and the independent variables are either categorical or continuous.

The logistic regression model can be expressed with the formula:

$$\ln\left(\frac{h_w\left(x^i\right)}{1-h_w\left(x^i\right)}\right) = w_0 + w_1 x_1 + \ldots + w_m x_m$$

In the logistic regression, $h_w\left(x^i\right)$ is the probability of the sample classified as the positive class, and each feature x_i has its specific weight w_i, where w_0 is the intercept while w_1 through w_m are the coefficients of the independent variables.

Our task is to find a set of parameters $w_0,\ldots,w_m$ such that the cross-entropy cost function between the output $h_w\left(x^i\right)$ and the actual values y^i is minimized.

$$J\left(w\right) = -\frac{1}{m}\left[\sum_{i=1}^m y^i \log\left(h_w(x^i)\right) + (1-y^i)\log(1-(h_w(x^i)))\right]$$

is minimized.

In addition, we applied elastic-net regularization to constrain model complexity and prevent model over-fitting problems with L-1 ratio equaling 0.5. We applied the grid search technique with 5-fold cross validation to find the optimal regularization strength. The 5-fold cross-validation divides the training data into five equal partitions and conducts five separate experiments to assess the model's performance with different regularization parameters. In each experiment, four folds are used for training, and one is reserved for validation, cycling through all the folds so that each is used once for validation. The set of regularization parameters that gives the best average performance across all experiments is then selected.

2.3.3 Model Validation

Consider a two-class prediction problem, where the outcomes are labeled either as positive or negative. There are four possible outcomes from a binary classifier. If the outcome from a prediction is positive and the actual value is also positive, then it is called a true positive (TP); however, if the actual value is negative, then it is said to be a false positive (FP). Conversely, a true negative (TN) has occurred when both the prediction outcome and the actual value are negative, and false negative (FN) is when the prediction outcome

is negative while the actual value is positive. In this way, the true positive rate (TPR) can be calculated as follows:

$$TPR = \frac{TP}{TP + FN}$$

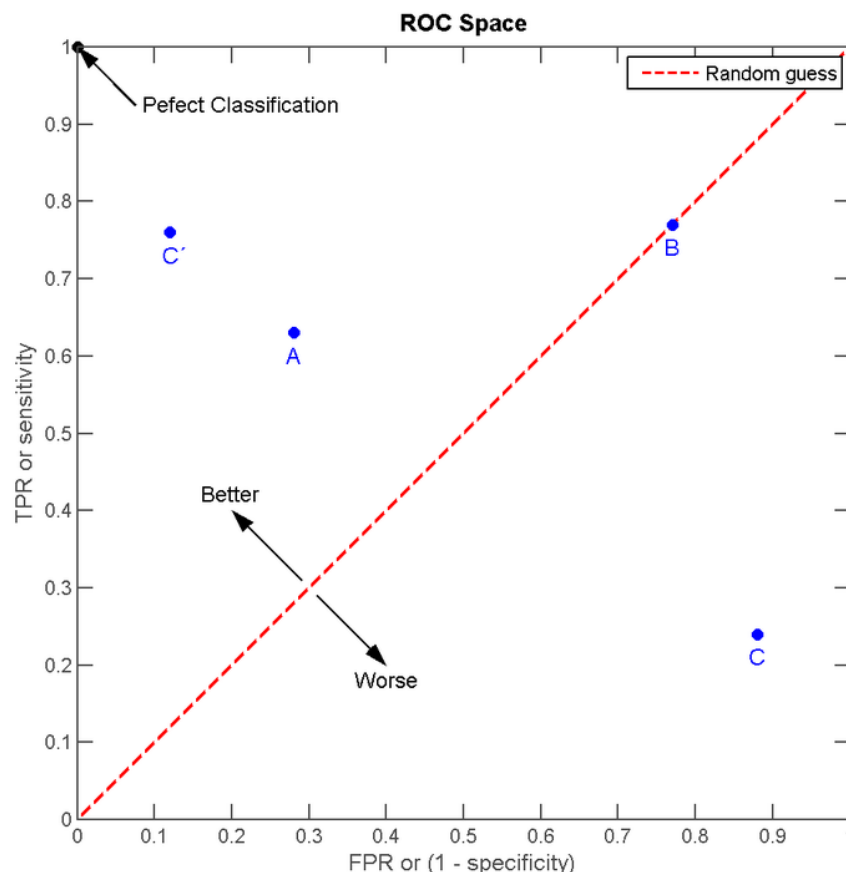And the false positive rate (FPR) can be calculated as:

$$FPR = \frac{FP}{TN + FP}$$

A confusion matrix is a table that allows visualization of the performance of an algorithm. Each row of the matrix represents the instances in an actual class while each column represents the instances in a predicted class. An example of the confusion matrix and the meaning of each cell within the table can be found in the graph below. Typically, the confusion matrix of a good predictive model has high true positive and true negative rates.

Figure 3. *Confusion matrix example*

	Predicted condition	
Total population = P + N	**Positive (PP)**	**Negative (PN)**
Positive (P)	**True positive (TP)**	**False negative (FN)**
Negative (N)	**False positive (FP)**	**True negative (TN)**

(left axis label: **Actual condition**)

Figure 4. *A sample ROC plot*

UNMASKING RISK FACTORS OF BULLYING BEHAVIORS AMONG ADOLESCENTS

A receiver operating characteristic curve, or ROC curve, is a graphical plot that illustrates the diagnostic ability of a binary classifier system as its discrimination threshold is varied. The ROC curve is created by plotting the true positive rate (TPR) against the false positive rate (FPR) at various threshold settings (Google. Classification: ROC Curve and AUC | Machine Learning Crash Course. Accessed November 25, 2021). The best possible prediction method would yield a point in the upper left corner of the ROC space. A random guess would give a point along a diagonal line from the left bottom to the top right corners. Points above the diagonal represent better than random classification results, while points below the line represent worse than random results. A sample ROC plot is shown in Figure 4. In general, ROC analysis is one tool to select possibly optimal models and to discard suboptimal ones independent-ly from the class distribution. Sometimes, it might be hard to identify which algorithm performs better by directly looking at ROC curves. Area Under Curve (AUC) overcomes this drawback by finding the area under the ROC curve, making it easier to find the optimal model.

3. Results
3.1 Confusion matrix and ROC curve

Figure 5 shows the confusion matrix of the logistic regression model. The upper left region is true negative, the upper right region is false positive, the lower left region is false negative, and the lower right region is true positive. As shown in Figure 5, the logistic regression model has a relatively high (~62.9%) true positive rate and a relatively low (~30.8%) false positive rate.

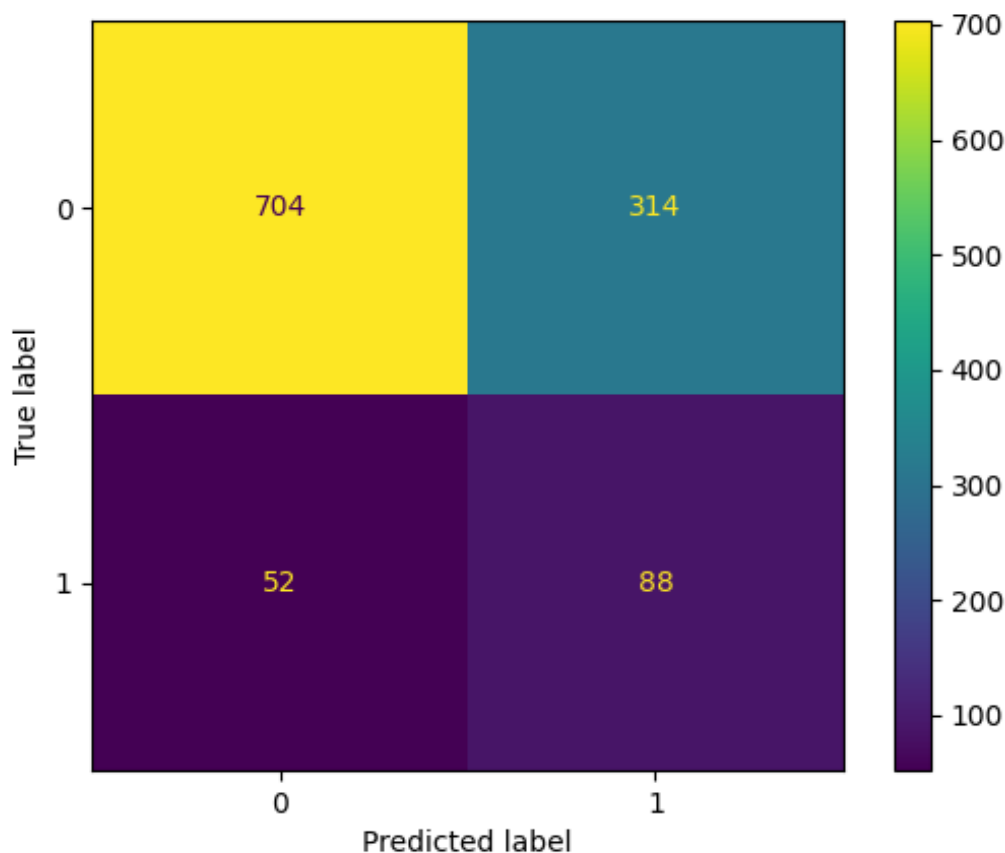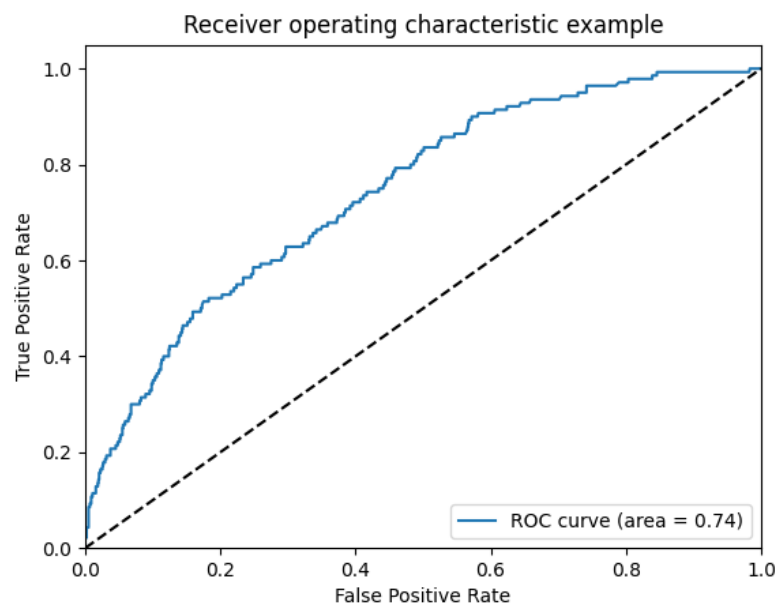**Figure 5.** *Confusion matrix of the predicted results.*

Figure 6 displays the ROC curve for the logistic regression model. It can be concluded that the model has results much better than random guessing and the AUROC score is 0.74.

**Figure 6.** *The ROC curve for the logistic regression model*

3.2 Feature Importance

Like in linear regression, the coefficients in the logistic regression model also provide valuable information about the direction and magnitude of the impact of each input variable on the dependent variable. In other words, these coefficients can provide the basis for a crude feature importance score. The figure below shows the coefficient of each input variable.

Figure 7. *The importance score for each feature*
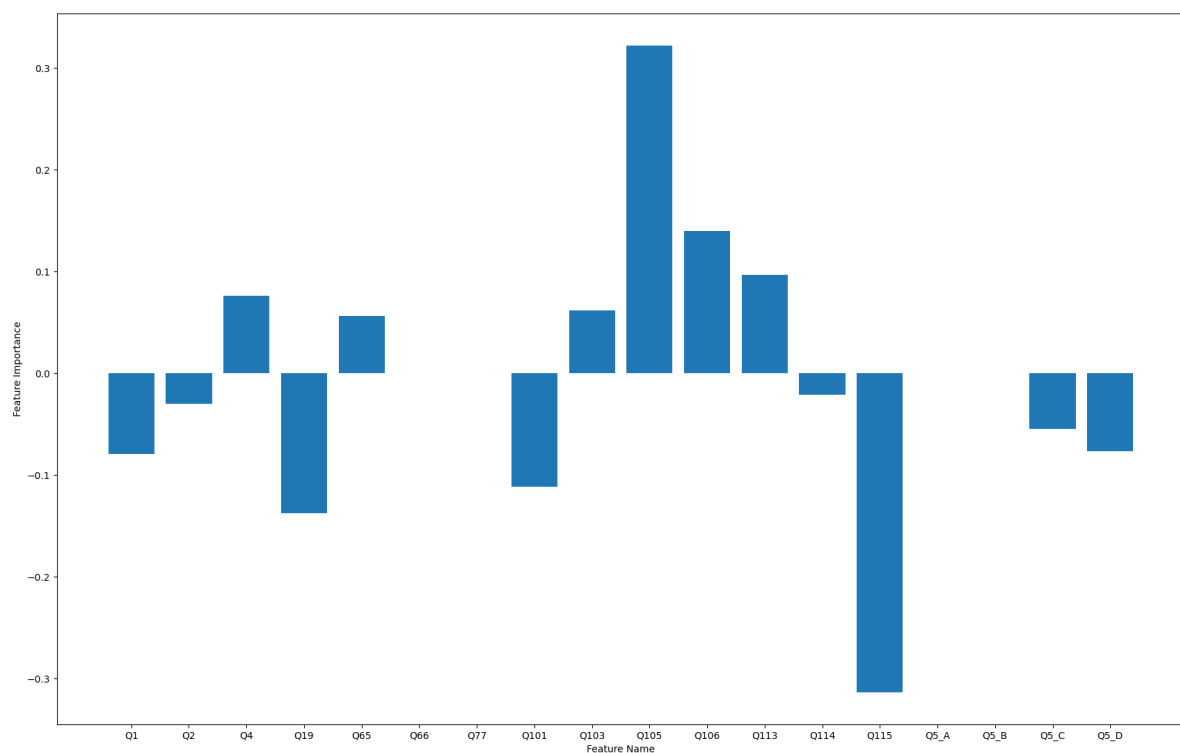
The chart below shows that variables Q19, Q105, Q106, Q115 all have relatively large impact on the dependent variable (adolescents' being bullied at school). These

results align with our findings from the correlation analysis. By analyzing those relationships in detail, we also found that being female, white, having more difficulty in concentration, having abusing family members, and having been forced to have sexual intercourse are all risk factors for developing mental health problems.

4. Discussion

This study intends to build a predictive model to investigate the factors most related to the bullying behaviors among adolescents. Through preliminary analysis, we discovered that gender, race, family members' attitude, and the adolescent's difficulty in concentration are all risk factors for the adolescents' mental health. A logistic regression model was built, and the AUROC score is 0.74, indicating that the model has achieved relatively good performance in making accurate predictions on whether a child will be bullied at school. The predictive model suggests that Q105 (family member's attitude toward the adolescent) and Q115 (difficulty in concentration) are top risk factors. A possible explanation of the results might be that adolescents with parents or family members frequently insulting them may receive much less love and encouragement and thus are less likely to interact with other students and more likely to be bullied. In addition, we also found that female white adolescents are more prone to bullying at schools. This predictive model is helpful for healthcare professionals to identify children that are at higher risk to be bullied and to develop mental diseases and come up with specific plans to reduce their risk for long-term impacts.

One limitation of this study is that data entries with missing values are excluded from the analysis. This is a timesaving but defective approach. Depending on the number of data entries with missing values, we may have removed too many sample points, resulting in losing valuable information for the model to learn the critical relationship between the independent and dependent variables. Therefore, for future studies, we may use more advanced techniques such as mean value imputation or k-nearest neighbors (kNN) to impute a value for the missing entries. The mean value imputation method completes missing values with the mean of the entire feature. This is a simple and effective way to make those entries usable by the logistic regression model. Other techniques include the k-nearest neighbor approach, which replaces missing values with the mean of k (a value assigned by users) nearest neighbors of that sample (Kozma, Laszlo. 2008). This technique requires more effort but can generally achieve better performance.

References

National Center for Educational Statistics. (2019). Student reports of bullying: Results from the 2017 School Crime Supplement to the National Victimization Survey. US Department of Education. Retrieved from URL: http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2015056

National Center for Educational Statistics. (2019). Student reports of bullying: Results from the 2017 School Crime Supplement to the National Victimization Survey. US Department of Education. Retrieved from URL: http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2015056

Google. Classification: ROC Curve and AUC | Machine Learning Crash Course. Accessed November 25, 2021. URL: https://developers.google.com/machine-learning/crash-course/classification/roc-and-auc

Kozma, Laszlo. "k Nearest Neighbors algorithm (kNN)". Helsinki University of Technology. (2008).

Contents