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COMMEMORATION CONCERT

Speech Room, 10 October

After seven months without ensemble music in Speech Room (or indeed much music at all – apart from some solo offerings from DNW on the organ), Harrow musicians showed us, in extraordinary style, that music at Harrow was back and better than ever on Saturday night in the Commemoration Concert. The concert began with the Brass group, which was particularly apt considering that they were the last ensemble to perform in the OH Room Concert (which was held in Speech Room) the day before the School closed its doors. They opened with a chorale tune of *Nun Danket Alle Gott*, a grand piece with lots of counterpoint, which was perhaps a not-so-subtle comment on finally being able to perform again! They then launched us into the 20th century with a vastly contrasting piece, *Another Cat: Kraken*. This was a much lighter and (dare I say) more fun offering. Perhaps we will hear Mr Mistoffelees coming out next time...



Following this were three small Jazz groups. The first group played *Watermelon Man* which featured SM on the cowbell and saw Mr Palmer debut in his new career on the maracas rather than the trumpet. The two soloists, Graham Lambert, *Lyon's*, and Dante Doros, *Elmfield*, did an excellent job at keeping the audience engaged and even got some doing a little dance in their seat! SM, being a master of many instruments, turned to the tambourine for the second group whilst Phillip Truscott, *Elmfield*, gave an outstanding solo on the trombone in *Memphis Underground*. After a change of scenery and a change of players, the final Jazz group, playing *I Wish I Knew How It Would Feel To Be Free*, featured another trombone solo, this time from Jonathan Barley, *The Grove*, as well as an impressive trumpet descant to finish.

The String Orchestra then took us back in time with Rossini's *String Sonata*. This was written when Rossini was younger than the boys who were performing it and took the classical fast-slow-fast movement structure. Under the dynamic leadership of DNB, the first movement had a light, almost dance-like feel with some homorhythmic writing and extremely virtuosic violin lines. The orchestra grabbed the audience's attention once again as they played the second movement, which was much darker and had much more musical tension, particularly in the gloomy *fortissimo* passages. We returned once again to the jovial style of Rossini for the final movement with an interesting *piccato*

effect from the upper parts and a fast solo played by Phoenix Ashworth, *The Head Master's*, on the double bass.

We were then taken from a young Rossini and treated to an old and mature Beethoven with the String Orchestra and members of the Chapel Choir singing his *Elegiac* song. It was published the year before his death and composed in memory of Eleonore Pasqualati, the wife of Beethoven's friend Johann Baptist Freiherr von Pasqualati zu Osterberg. The piece is rather reserved, with two climatic moments and a restrained string part, yet has a feeling of pain and drama. Unfortunately, due to the pandemic, we were not able to celebrate this great composer's 250th anniversary, yet this was a small indication of our appreciation of Beethoven.

The concert closed with a performance of Mozart's *29th Symphony in A major*. A smaller orchestra was required due to lack of space and a need for social distancing, so this piece, with strings, two horns and two oboes, was of a perfect size. Unfortunately, with the confirmation of a positive case on Wednesday, the first horn player was sent home and there was a last-minute scramble for the (extremely difficult) part to be learnt and a replacement to be found. Fortunately, it all turned out well and a brilliant performance ensued. The opening movement brought a rhythmic energy to the symphony with all the well-known features of a first movement (i.e. sonata form etc.). The second movement was slightly more reserved with much longer and more legato melodic shapes. The Minuet and Trio had an elegant dance-like feeling and the final movement had a lot of momentum with sudden bursts from the wind to create some drama. A wonderful end to a great evening.

It goes without saying that all the Music beaks involved in leading the ensembles should be thanked. DNW should also be thanked, not only for leading the ensembles but for figuring out the logistics behind a socially distanced concert with as many boys involved as possible!

WAITING FOR GODOT

*Rattigan Society Production, Drama Studios,
8 October*

There was a tangible sense of anticipation ahead of this year's production from the Rattigan Society – the House Scenes competition earlier in the term had set the tone for a high standard of acting and, with a star-studded cast and directing team, it was clear we were in for a treat. The two Upper Sixth boys, Max Morgan, *Rendalls*, and Gabe Rogers, *The Knoll*, had decided to direct a rendition of the first act of Samuel Beckett's absurdist play *Waiting for Godot*.

The directors excellently co-ordinated every movement and line so that it had the full potential to equally shock and provoke thought within the audience – a testament to their excellent knowledge of both the text and the abilities which a director must have.

Of course, no good play can be achieved without an excellent cast and for this the Upper Sixth has many. An all-star cast of actors shone in the spotlight of the Ryan. Freddie Strange, *Newlands*, and Rogers played the dynamic duo of Vladimir and

Estragon, using a range of physical comedy and quick-fire banter to draw many a smile from the audience. Rogers and Strange also grounded the absurd plot with the same confusion as the audience, keeping us on the edge of our seats the whole time, wondering what strange premise we'd be given next.

The strangest of them all were the terrifying pair of Pozzo and Lucky, played by the brilliant Matthew Ball, *Moretons*, and George Gallagher, *The Grove*, respectively. The audience shuddered in terror when Ball strode into the theatre like a deranged dictator, screaming and whipping a figure drowned in clothes and bags who seemed to whimper in dismay. The following actions were still more disturbing as Ball and Gallagher's double act of the servant and master took a wild and dark turn. Gallagher showed off his acting prowess through a range of movements and vocalisations throughout most of the play. These were subtle enough to bring a sense of melancholic sadness and concern to both the audience and our two protagonists who, bewildered, questioned the mad Pozzo as to what was happening. Eventually, after much coercion and the terrifying order to "think", Gallagher's Lucky began a terrifying monologue, lines and lines of gibberish and incomprehensible intellect mashed together before he dropped dead on the floor before us. As the pair departed from the stage screaming, whipping and howling, one was left with an overwhelming sense of confusion and was forced to ponder the absurdist themes of the play. To round off the cast was director Max Morgan, *Moretons*, as the boy. Though his stage time was limited, we began to learn a little more about Godot as well as Strange and Roger's characters.



Mention must of course go to the fantastic set, expertly designed in keeping with social distancing regulations. Seats were spaced out on the stage, allowing our characters to walk in and out of the audience (a terrifying feeling upon Ball and Gallagher's arrival), further adding to the suspense. The artistic decision to show the waiting point as a rubbish dump further added to our characters' plight, as well as perhaps their mindset. The costumes too, were fantastically done, with attention paid to the iconic hats of Vladimir and Estragon, the heavy coats of Lucky, and Pozzo's fantastically ridiculous suit and glasses.

Huge congratulations must go to everyone involved both on- and off-stage. It was a fantastic albeit absurd play, and it is a delight to see the thespian life of the School in good health despite the circumstances.

OH PLAYERS' HAMLET

The Old Harrovian Players have exceeded all expectations in their skilful revival of Shakespeare's *Hamlet*, with OH Tobias Deacon transcending the need for visual performance. Despite COVID-19 impeding the production being staged in a conventional format, the cast excellently transplanted the tragedy of Shakespeare's masterpiece. Where staging and showcase have been stolen, Ubong William as Hamlet shines through the void and fills it with eloquent expression and grief-stricken

articulation. Hamlet's urgency and madness is depicted expertly as he attempts to avenge his father, accompanied by a soundtrack crafted such that one might forget one is watching from home and feel encompassed into a world of ghosts and murder.

This is a refreshing take on Shakespeare's classic tragedy, with a magnificent explosion of expression and emotion. When bombarded with bright colours and bright lights, the words of Shakespeare's cast are lost. Deacon has used speech to isolate the raw emotion of the characters. For example, Ophelia's suicide is not overlooked and misplaced in the drama of the last two acts but instead is brought forward and recognised through Lloyd's anguished delivery of the news of Ophelia's death. The disintegration of Ophelia is dramatized and embellished by Cameron's rich and layered vocalisation of a woman driven mad by the death of her father at the hand of her lover. Where Shakespeare's constriction of Ophelia's involvement limits the audience's sympathy, Cameron serves justice to an otherwise subordinated lover. Equally, Gertrude's inclination for good and redeeming kindness is showcased, as she is not made the adulteress depicted in a staged production but exhibits her underlying compassion for both her son and Ophelia. Lloyd's portrayal arouses more grief and empathy from audiences, compounding the poisoning of a mother, wife and companion. As a result, the women of Shakespeare are not abandoned and forgotten among the conflict and confusion of their male counterparts.

The Old Harrovian Players' audio production has proved the responsiveness and adaptability of the arts. A new light is shone upon Hamlet as audiences are directed by the actors to envision their own horrified Prince, maddened Ophelia, scheming Claudius and vengeful King Hamlet. Assisted by excellent production and sound, Annabelle Brown enhances the sense of realism in a way lighting and staging cannot. The ghostly apparitions of Hamlet's father are no longer limited to stage effects. *Hamlet* the play is characterised not merely by the presence of a supernatural being among its persons, but by the actual participation of this supernatural being in the action. This is not overlooked in this year's production. The ghost of Hamlet's father concerns himself practically in the scheme of revenge, an intervention accomplished by Collins with incredible use of his voice.

The conclusion to the revenge tragedy is unforgettable as each instrument in Hamlet's downfall suffers a macabre end. To summarise the life of a Prince who fought for nobility, honour and morality in a disturbing display of murder only further compounds the tragedy and misfortune of Shakespeare's iconic tragic protagonist. Overall, Deacon and the cast and crew have honoured the traditions of one Shakespeare's most famous works produced a magnificent version of *Hamlet*.

ORIENTAL SOCIETY

Q Sun, *Moretons*, "Chinese Religion and Philosophy: Why so Confucian?", 8 October

Last week, the Oriental Society was addressed by Q Sun, *Moretons*, who gave a lecture on 'Chinese Religion and Philosophy: Why so Confucian?'. Sun did not fail to keep all of us engaged and entertained throughout the lecture by questioning us about various religions and presenting different iconic landmarks across China. Sun's extensive knowledge of Chinese history was evident throughout the talk as he took us on a tour of its religions and philosophies.

He kicked off the talk with classic definitions of philosophy and religion, making sure we were all aware of the differences between them, which are commonly misunderstood. He then showed us interesting symbols of varying religions and

philosophers. Perhaps the most interesting symbol would be the shrug emoji (¯_(ツ)_/¯), which signifies a complete disregard for everything in the universe including existence and knowledge.

Next, Sun drew our attention to great Chinese philosophers such as Confucius and Mozi, revealing to us beautiful pictures of buddhas and explaining the significance of each. He explained that these laughing buddhas represented enlightenment, which one can achieve by praying under a tree. Sun then moved on to talk about Confucianism, which expects us to have social responsibility and adhere to a certain set of morals. Sun then pulled out a red book, which belonged to his grandmother when she studied her masters in China, and read to us quotes from Confucius.

Sun also touched on the yin and yang symbol, talking about Bagua representing the fundamental aspects of reality and how to achieve enlightenment by following trigram lines.

Sun also shed light on the demographic of religions in the world, touching on recent hypocritical and weird accusations about China and its religion, such as Mike Pompeo pressuring the Vatican on China's record on religious freedom. Sun drew a comparison with how the USSR collapsed, which was not due to Christians but because more people chose to become atheist.

Before finishing his talk, Sun brought up a very important issue facing us today, which is that we are slowly erasing history and the lessons that come with it. He urged us to remember the lessons we have learnt from history and not repeat the same mistakes.

Sun's lecture on Chinese religion and philosophy was refreshing to experience and provided the audience with many examples of religions in China's long history, along with the lessons that we could take away from each of them.

ALEXANDER SOCIETY

*Peter Cartwright, The Grove, "The Battle of Assaye (1803): The Fiercest Battle Ever Fought",
Vaughan Library, 8 October*

On Thursday 8 October, the Alexander Society had the honour of welcoming Peter Cartwright, *The Grove*, who gave a talk on the Battle of Assaye, focusing on whether it was the fiercest battle ever fought. Assaye was decisive in the conquest of India as it confirmed British professionalism and skill on the battlefield.

The talk commenced with an explanation of the situation in India in around 1800. The British held three presidencies at the time: the Madras, Bombay and Bengal Presidencies. In 1799, the British finally defeated the Tipu Sultan of Mysore, leaving the Mahratta Confederacy, which occupied large swathes of the continent, as their main rivals. Three years later, a civil war broke out within the Mahratta Confederacy, creating an opportunity for the Governor General, Lord Mornington, to launch an offensive against them. His younger brother, Arthur Wellesley, led the incursion from Mysore.

The next section of the talk was on the differences between the British forces and the Mahratta army. 13,500 men fought for the British forces, including the 74th and 78th Highland Regiments and the 19th Light Dragoons. There was also artillery: eight 12-pounders and two small howitzers, all under the command of Major-General Wellesley. Facing them was the Mahratta Army, led by Mahadji Scindia and comprising between 40,000 and 200,000 men, with 30,000 horsemen, 12,000 infantrymen and a 100-gun artillery – a significantly larger army than that fielded by the British.

Cartwright moved on to discuss the build-up to the battle, explaining that Wellesley had in fact been preparing for the invasion of the Confederacy since the fall of the Mysore

in 1799. Armed with detailed knowledge of the geography and climate of Assaye, Wellesley instructed his elder brother to launch the offensive during the monsoon season, in hope that it would slow down the Mahratta light cavalry. In March 1803, he moved towards Poon where he restored the Peshwa with Colonel Stevenson, who had moved out of Hyderabad.

The perfect arena for a fierce battle had been created, with the battle officially starting when Wellesley and Stevenson chased Scindia north east. On 23 August 1803, intelligence told Wellesley that the Mahratta army was six miles away; the British would find it hidden opposite the Kaitna river. The river posed a difficult obstacle due to its steep banks, forcing Wellesley to attack through the army's large right flank. The flanking operation proved to be complicated; he first ordered his infantry, accompanied with four 12-pounder guns, to cross the ford at Waroor to attack the Mahratta left flank. Then the infantry formed in two lines on the far bank, causing the Mahratta army to shift around until its left flank lay on the village of Assaye. The Mahratta artillery subjected the 74th Highlanders and Madras infantry to heavy fire as they approached Assaye, which resulted in such brutal fighting that the 74th were almost wiped out. The Mahratta light cavalry then swarmed the remnants before the Light Dragoons charged, pushing the Mahrattas back. In contrast, the 78th Highlanders were subjected to less heavy artillery fire and progressed much better through the Mahratta right flank. French mercenaries who were leading the Mahratta regiments quickly abandoned their posts, leaving the lines to break easily. The cunning Mahratta gunners, who had feigned death, turned the guns around and bombarded the British from behind, the barrage ending only when the British secured the guns.

However, the most important element of the battle was the aftermath. The Mahrattas suffered 5,000 casualties and deaths. Seventy-nine officers and 1,900 soldiers lost their lives. The 74th Highlanders suffered the worst as 11 officers died and the remainder were wounded. Colonel Stevenson continued to pursue the opposing army until the Mahrattas sued for peace in November 1803. War broke out again only weeks later, and only after 15 years was the Mahratta Confederacy ultimately disbanded and control of Central India handed to Britain. Assaye established Wellesley's reputation in India and, even after Waterloo, the Duke regarded this battle as his finest achievement. Further appointments in Denmark and Portugal led to his command of the British armies on the Iberian Peninsula, where he would finally defeat Napoleon. Overall, Cartwright's talk gave us a fascinating insight into the lengths British forces went to in order to expand the Empire. I would like to thank DF for organising such an educational event and Cartwright for a great delivery.

COMPUTER SCIENCE SOCIETY

Luke Shailer, Rendalls, "Help! I accidentally built a computer!", Physics Schools, 14 October

On a cloudy afternoon in Physics Schools, Luke Shailer, *Rendalls*, gave the first Computer Science Society lecture of the term on the 6502 Chip and 8-bit computing. A select few keen computer scientists gathered to listen. Once the room had been filled to COVID-19 protocol limits, he started his lecture by explaining the basic data flow of a W65C02 breadboard computer.

The 6502 Chip was one of the first affordable computer chips that weren't so extraordinarily large that they would take up entire rooms. These chips were used in everything from medical devices to the Apple II. They were so popular that a modernised version is still in production, 45 years after its inception. The processor had two buses on either side, a data bus

and an address bus. The data bus linked the 6502 processor, the ROM, the RAM, and two VIAs, and the address bus linked all these components to a centralised control logic unit. This sends signals to each mechanism telling them what to do or whether to be in an “off” state. Three registers (X, Y and A) made part of a more complex version, each 8-bit registers to store data. An arithmetic logic unit sat right at the heart, performing the addition, subtraction and logic operations for the processor.

Shailer then explained the 6502 assembly. In basic terms, the instructions are made up of an operation code (e.g. add memory = ADC) and an operand, which is the argument for the operation. This allows the processor to run multiple commands without running into memory issues or loading the wrong data from the wrong place. He then explained how he set up the breadboard to be able to output a video signal. He swapped out part of the RAM (random access memory) for VRAM (video RAM). To use this visual output, he used a VGA signal. Many of you may have used a VGA to connect an external monitor, but Shailer shed new light by explaining how it uses V-sync and H-sync (vertical and horizontal sync respectively). Shailer managed a respectable 100x75 resolution on his screen using only the W65C02 breadboard computer. Any higher resolution would have needed more VRAM to support the refreshing of the monitor.

The lecture ended with Shailer showing us the definitions for the instructions of the graphics code. This rather confusing-looking blue screen has a series of hexadecimal numbers, defining a ‘start’ position, loading integers into registers and defining loop variables. Thus, concluded the first Computer Science Society lecture of the academic year.

GEOGRAPHY SOCIETY

*Dimitri Samonas, The Knoll, and Ezekiel Akinsanya, Lyon’s, “Is Globalisation What We Really Want?”,
OMS, 14 October*

On Wednesday night, the OMS was at its full capacity as Dimitri Samonas, *The Knoll*, and Ezekiel Akinsanya, *Lyon’s*, gave an informative lecture entitled: ‘Is Globalisation What We Really Want?’. Globalisation is the process by which the world is becoming increasingly connected as a result of increased trade and cultural exchange. The talk encompassed the pros and cons of globalisation, which led to an intriguing discussion with the audience.

The lecture began with Samonas discussing the benefits of immigration, which is an aspect of globalisation. He explained how the immigration of skilled workers from countries with a surplus of workers in a specific sector can benefit a nation with a deficit in that particular sector. He explained how India benefited from immigration as the ratio of doctors to population is 1:1,000 which is the WHO’s (World Health Organisation) ‘golden finishing line’. This line indicates that there is a perfect ratio of doctors to patients, with no surplus or deficit in the sector. However, in Greece, Samonas stated that there exists a ratio of 6.3:1,000 indicating a large surplus.

Samonas explained how TNCs (Transnational Corporations) can help boost a country’s economy and interconnect businesses to other countries. An example used was Shell in Nigeria, which directly created 6,000 jobs, with 90% of the workers being Nigerian. This contributed largely to the GDP of Nigeria as well as the country’s productivity rate, which increased by 10% in 2018. Samonas also discussed how exports bring injections of foreign money into the economy, adding to the GDP of the domestic economy. Additionally, imports can bring foreign goods to a country which would otherwise not have had access to certain resources.

Samonas raised an interesting point about how connecting countries is not always physical but instead can be the flow of ideas. The flow of culture between diverse groups enables people to experience different lifestyles, products and celebrations. This exchange of ideas can help people understand worldwide cultures and promote greater cultural acceptance.

Another point raised by Samonas was that international connection and agreements help to maintain world peace. Countries that are more cosmopolitan tend to be able to maintain government sovereignty, limit political instability on an intranational level and reduce the likelihood of people developing extreme nationalistic political views. As countries become increasingly interconnected and form trading pathways and bonds, they become allies. This is useful as a country in need of aid or financial help can be helped by their allies.

In the second half of the lecture, Akinsanya spoke about the disadvantages of globalisation. His first point was how globalisation causes unemployment and overpopulation. For example, people seek employment in the forefront of the industry that they work in to maximise their opportunity. Consequently, this leads to overpopulation in areas with high job popularity. For example, London is known as a financial capital and attracts eager workers, which has caused a population density of around 6,000 people per kilometre squared, which is unsustainable if it keeps increasing. Additionally, because globalisation creates competition, countries that produce goods and services at a lower price will profit and benefit more and this will lead to unemployment for countries whose goods are not in demand.

Akinsanya’s second point was in relation to trade imbalances. He used the example that if Mexico exported beer to the Netherlands and vice versa but Mexico sold it cheaper, people would drink Mexican beer instead of beer from the Netherlands. The Netherlands in return would increase the tariff on Mexican beer and then Mexico would do the same. This creates what we know as a trade war and leaves no country benefiting and, depending on a country’s economic size and what they produce, it can turn into a global issue.

The last point made by Akinsanya was similar to Samonas’ point on the flow of ideas. However, Akinsanya argued that this led to the loss of original culture. For example, a large TNC such as KFC has opened more than 23,000 restaurants worldwide, causing many local cuisines to go out of business and creating what we know as ‘clone high streets’. Moreover, small scale businesses may soon have no chance to compete in markets because large TNCs are much more cost- and labour-efficient compared to smaller businesses since they are able to exploit economies of scale, effectively creating oligopolies and making it extremely hard for small businesses to thrive.

Akinsanya and Samonas concluded their talk by reiterating the many benefits of globalisation. In addition, it was clear that, at this current point in time, globalisation is in full swing and unlikely to end in the near future. However, it is important that the issues synonymous with globalisation reach suitable solutions that will allow us to preserve our culture, environment and peace without hindering the economy.

SHERIDAN SOCIETY

*Joseph Wragg, The Grove, “Tolkien’s Mythological,
Literary and Lifetime Influences”, The Copse,
15 October*

There was a particularly impressive turnout for the second Sheridan Society meeting of the term last Thursday, particularly given the fact that the email publicising it was sent out the morning after Joseph Wragg, *The Grove*, delivered his excellent

lecture on 'Tolkien's Mythological, Literary and Lifetime Influences'. Over the course of 40 minutes, Wragg expounded his incredibly thorough knowledge of J.R.R. Tolkien (1892–1973) and the literary, biographical and historical influences which he used to forge his own cosmos: Middle Earth. From this world have emerged some of the greatest fantasy sagas to have been written, such as *The Hobbit*, *The Lord of the Rings* and *The Silmarillion*.

After outlining Tolkien's key works, Wragg continued the lecture by discussing how Tolkien was not just informed by Anglo-Saxon, Germanic and Norse cultures when creating his mythology, but how he actually revived and adapted such ancient texts into his novels. Tolkien was obsessed with early Anglo-Saxon culture, which he believed ended with the Norman invasion of 1066, and its combination with Germanic and Norse influences to form multiple strands of myth in Medieval England. Renowned as a scholar for bringing the Old English poem back into the canon, Tolkien can clearly be seen to incorporate aspects of *Beowulf* into *The Hobbit*. Amongst other parallels, the dragon Smaug, people of Heorot and key themes of honour and good versus evil appear in the novel; in fact, Legolas directly quotes from it: 'lixte se leoma ofer landa fela' (The light of it shines far over the land') – a line which Wragg delivered with impressive nonchalance. One must not forget that Tolkien himself created upwards of ten comprehensive languages, complete with all the grammatical bells and whistles the Classics department could wish for. Tolkien also directly draws from the two families of Ancient Norse gods, the Aesir and the Vanir, to create the epic division between the Maiar and Valar in his own legendarium. He also pinches Elves and multiple characters from the Nordic *Volsung* saga, the Andvaranaut ring of which bears great resemblance to the One Ring in *The Lord of the Rings*.

Having explained how the Germanic *Die Nibelungenlied* influenced both Tolkien and the composer Richard Wagner, and after watching six Groveites and JDS bob their heads to *Ride of the Valkyries* for roughly two minutes, Wragg outlined how Tolkien's Catholicism and Birmingham upbringing also influenced his mythology. Scornful of C.S. Lewis' allegorical *Narnia Chronicles*, Tolkien drew on themes and figures from the Bible in a different way, such as Gandalf's transition and Christ-like resurrection from Grey to White. Having grown up surrounded by smouldering factories, it is often assumed that the self-consuming urges the One Ring bestows on its wearer represent the capitalist greed and industrialisation of the time. Mechanisation and urbanisation also figure in the penultimate chapter of *The Lord of the Rings*: The Scouring of the Shire, where the Hobbits return to the Shire to find that it has been turned into an industrial wasteland by the dastardly wizard Saruman.

WWI also had a great bearing on Tolkien. Sent home in 1916 after three months at the Somme, it was then that Tolkien began the first works of Middle Earth, probably using his experiences of war to describe the Fall of Gondolin and Orc troop carriers in his fictional realm of Middle Earth. Tolkien ended the war having lost three of his closest Oxford University friends and with shell shock, so it is unsurprising to see the psychological and emotional trauma of this period expressed in his literature; it was, as Wragg puts it, 'the colossal event that set him on the path to creating his monumental mythos'.

Many thanks and congratulations go to Wragg for his superb and engaging lecture. The depth and breadth of analysis was a true indication of his passion for Tolkienian mythology, as an audience member justly commented: "to say you know your stuff is a massive understatement". Any boy who fancies bettering the high standard of Sheridan Society lectures so far this term should not hesitate to contact JDS about arranging their own talk on the subject of anything literature related, although perhaps next time an email will be sent out in advance of the meeting. Perhaps.

METROPOLITAN

ON ECONOMICS

Tej Sheopuri, Lyon's, "Which problems will economists need to solve within the next 20 years, and will artificial intelligence help them?"

Economics is no longer a simple mean of money, where nations seek to maximise GDP growth and dominate markets, and trade, on a global scale. Rather differently, the concept of Economics has evolved hugely in the last half century, focusing on 'softer' branches of society, and the quaternary sector of the economy – i.e. artificial intelligence (AI). The rise of industry and capitalism during the Gilded Age (circa 1870-1910), in the USA, epitomized the money-driven mindset of economists in the 19th and 20th centuries (notably, John D. Rockefeller and Andrew Carnegie). However, after the second World War, attention was drawn away from raw power and money. Instead, technology, and its applications within society, engulfed the field of Economics, giving birth to environmental and social challenges. Thus, in the next 20 years, a reduction in global poverty, climate change and the allocation of scarce resources appear to be quintessential factors in influencing the shape the world will take, therefore posing themselves as problems for economists, and AI, to solve.

Poverty can be based on levels of income, and the access to basic human necessities (i.e. food, water and shelter). Since 1990, 25% of the world has escaped extreme poverty. However, still 10% of the world's population lives in extreme poverty, surviving on \$1.90 a day, or less. 700 million people living in such harsh conditions does not only create social issues within society, but national economic problems as well. Groups of society who are stuck in the 'poverty cycle' often find it impossible to rise out of extreme poverty. Whilst stuck in the cycle, there is a never-ending tussle between work and education. The best way to generate sustainable income, in the long run, is to go through educational systems. However, the draw backs education possess (such as monetary fees) make it difficult to manage and support families in the short-run. Thus, schemes must be implemented to reduce such poverty. One approach used is to simply maximise employment. Take India, for example: with such a large population, it is expected that a significant number of people live in poor conditions. As a result, the government seeks to create as many job opportunities as possible to give a greater proportion of the population sustainable income, increasing national output and efficiency. Minor jobs in India, that may not be found in developed places like the UK, such as extra security guards in buildings, and gas station attendants, give struggling societies the monetary capacity to escape poverty by undertaking education. However, policies relating to maximising employment are not enough to reduce poverty on national and global scales. Consequently, AI can be used. Rather than focusing on employment, modern technology allows both education and aid to be bettered, and be made more efficient. Pearson's new online teaching portal acts as testament to the positive effect AI can have on improving education. Pearson's new scheme provides an online school for people to access from across the world, who are unable to afford school fees. Instead, a smaller monetary fee is paid. Underprivileged students, therefore, can take part in secondary education, helping them gain qualifications, and seek higher paying jobs in the future. What is more, AI, in conjunction, with satellite technology, further reduces global poverty. With both AI and satellite technology integrated together, areas destroyed by conflict, or natural hazards, can be identified with ease, allowing aid to be distributed to these areas more

efficiently. Whilst countries are still functioning well and expanding, in economic terms, reducing poverty on a global scale has unprecedented advantages. As well as the social improvements it creates, reducing poverty further increases a country's efficiency and output, enabling sustainable economic growth, a key macroeconomic objective.

Furthermore, reducing the rate of climate change in the future is certainly an issue for economists to solve. Although climate change refers to the general change in global and regional climate patterns over an extended period of time, the most common issue that has risen to the surface is carbon dioxide (CO₂) emission, and the consumption of fossil fuels. As more fossil fuels are burned in an attempt to release energy, more CO₂ is released into the atmosphere, contributing to global warming. Unsurprisingly, global warming has huge environmental effects: removing the natural habitat for polar bears in the arctic, and allowing animals (e.g. Mosquitoes) to migrate to higher latitudes. However, economic and social issues also arise due to such great change in the Earth's climate (such as lower productivity due to extreme weather conditions, as well as a greater risk of mortality due to the spread of disease). As a result of this, climate change is a problem that must be countered. With Greta Thunberg's ideals being too extreme to achieve, and Donald Trump's neglect of the Paris Agreement in June 2017 seeming unjust, a definite balance can be struck between these two poles to resolve the underlying issue. Elon Musk's Tesla automobiles exemplify the combating of fossil fuels. The huge success of such electric cars reduces the need for petrol and diesel, reducing fossil fuel combustion, and global warming. Furthermore, the use of AI in Tesla cars, such as its autopilot feature, as well as its unique sensory systems, highlights how climate change can be stopped by both physical and technological means. That is to say, giving up fossil fuels and taking up electric cars comes at no expense what so ever, as the features made from sophisticated AI surpass the dated features in regular petrol cars. More so, advanced technology and AI used in nuclear fission, as well as nuclear fusion research, further counters climate change. In the last century, nuclear energy has been harnessed to create a more renewable supply of energy, when compared to fossil fuels. In the future, however, improvements in technology and AI may further better the extraction of nuclear energy. Take nuclear fusion, for example: with technology improving rapidly, reactors have been produced to experiment with some parts of the nuclear fusion process in an attempt to release large amounts of energy with little environmental damage. Therefore, within 20 years, AI may act as the key to unlock more parts of the fusion process, resulting in even more energy extraction, and providing a solution to global warming, and climate change.

In a similar vein, the allocation of scarce resources is a problem that economists must tackle. Due to unlimited wants and finite resources within society, inequality is created between what is provided, and who receives certain products. In the past, capitalist economies proved to be the forerunner in economic growth, hinting that resources allocated based on people's incomes was suitable and successful. Indeed, America's Industrial Revolution in the early 19th century highlights how a free-market economy can turn into a global powerhouse within the space of a few decades. Despite this, however, the 21st century has sculpted a contrasting model. Rather than capitalist and free-market economies dominating global markets, communist and centrally-planned markets, in the form of China, have showed that a nation does not need to be capitalist to achieve economic success. Indeed, China's economy over-taking the USA's in 2018 (\$25.27 trillion versus \$20.49 trillion) reinforces the fact that human resources and technology play a more prominent role in economic prowess than the old-school capitalist and money-driven nation. Thus, economists are posed with a question: who gets allocated certain resources? Theoretically, the answer is simple: people in free-market nations pay for what they need, whilst people in centrally-planned economies

are given a fixed set of resources, irrespective of their income. In reality, however, it is far more complex, meaning AI will play a key role in determining which type of economy suits different nations best. One simplistic measure that AI can record and monitor is that of population size, and the Human Development Index (HDI) of various nations. Using the USA and China as examples, we note how varying HDIs affect the type of market implemented, which, in turn, controls how resources are allocated. The USA's very high HDI score of 0.920 works hand in hand with its free-market economy, whereby a capitalist regime can be maintained, as the majority of people are able to buy resources and satisfy their personal wants. China's lower HDI score, however, of 0.758 suggests that the average person is less capable of buying resources compared to a US citizen. Thus, its communist regime suits the nation well, as people unable to buy resources are compensated by the government. Bearing this in mind, we note AI's importance in determining the allocation of scarce resources on a national scale: its ability to monitor and interpret social and economic measures of society allows economists to see what style of economy and markets suit each country best.

On balance, therefore, it is apparent that world poverty and climate change, as well as the allocation of resources, are essential issues that economists must strive to counteract within the next 20 years. With the world moving to a more technological future, the use of AI in tackling such problems appears to be a necessity. More specifically, however, the issue of global poverty may be seen as more pressing than its 'climate change' and 'allocation of scarce resources' counterparts. China has portrayed to the world that productive individuals, making up a strong human workforce, enables a nation to transform itself into an economic super-power. Thus, tackling global poverty immediately, causing an increase in productive individuals, benefits a nation's economy hugely, and allows climate change and resource allocation to be tackled soon after. As John Maynard Keynes put it, "we are all dead in the long run," highlighting the importance of reducing poverty as a means of improving economic production within a few years.

OPINION

GAFFE AND GOWN *Quips from Around the Hill*

"I'm cutting back. I only do, like, an hour of Surface misuse a week now."

"Now boys, make sure that you embed quotations in your essays." "Sir, do I need to take them to dinner first?"

CORRESPONDENCE

DEAR SIRS,

I am writing in response to last week's thoughtful opinion piece from Brandon Chang, *Druries*. While I can appreciate he may not be thrilled with the level of variety in the opinion column, I do not agree with his scathing criticisms of the letters frequently submitted by Dylan Winward, *Lyon's*.

Chang begins his letter by boldly accusing Winward of constantly writing letters that 'whinge about something very few people care about'. Nothing could be further from the truth: Winward is not aimlessly ranting about inconsequential matters, but is making constructive suggestions that impact considerable swathes of the Harrow population. To name but a few topics that impact a massive proportion of boys, Winward has written constructively about the points system, the commerce ban, issues of hierarchy, AS tracking, the mobile phone policy,

prep schedules, and award ties. His letters notably won 160 Fifth Formers the privilege to wear award ties, and contributed greatly to the introduction of Harrow Prize Mentions. It is clear Winward is addressing genuine matters of real consequence.

I must admit I was quite confused with Chang's connection between deceitful Druries' Sixth Formers trying to offload their kit and the School's commerce ban. If these unkind older boys are happy to pressure a 'timid Shell' into buying overpriced eccer kit, they would presumably be equally happy to pressure the aforementioned timid Shell into circumventing an inconvenient commerce ban. Chang accuses Winward of committing a 'logical fallacy', but it is clear his own letter is not free from these either.

Winward rightfully explains that there is a dead-weight loss when a boy is unable to sell a spare calculator at a reduced price to another boy who needs one. Chang perplexingly calls this commendable reuse of equipment 'selfish and foolish'. Instead, he proposes each boy turn their room into a lending library, loaning out all spare possessions. Not to do so would be 'selfish and foolish', after all. Chang also fails to realise the incredible waste produced by unnecessarily ordering an additional calculator. Having recently purchased one myself, I had to tear through a cardboard box and plenty of plastic packaging to acquire the desired device. Leaving another perfectly good calculator unused also creates unnecessary e-waste. This e-waste is no joke: major companies have recently taken steps to minimise it, with Apple this week ending the practice of shipping every phone with a potentially unnecessary charger. What Chang calls 'selfish and foolish' is actually convenient, efficient and environmental.

Chang states that he is 'appalled' that Winward 'misquoted the great Churchill', using the number 1,000 instead of 10,000. However, Winward did no such thing: he never mentioned Churchill, attributing the quote merely to 'a wise man'. Chang then claims Winward's letter 'misses the point' of the quote, but it is clear that Chang is the one who has missed the point of Churchill's quote. A little digging through official Parliamentary records indicates that Churchill spoke of these '10,000 regulations' to the House of Commons on February 3, 1949. Given Chang's disdain for calculator-commerce, I find Churchill's full quote incredibly humorous: "If you destroy a free market you create a black market. If you make 10,000 regulations, you destroy all respect for the law". Churchill is praising the free market and siding with Winward. As Chang wrote, those of you who study Maths may be aware there is 'an extremely big difference' between 1,000 and 10,000. I would like to add that those of you who study Economics may know that there is 'an extremely big difference' between a free market economy and one where commerce has been banned.

In conclusion, I believe it is evident that Chang's criticisms of Winward are misguided. If he would like to see more optimistic letters in the opinion section, I would strongly encourage him to contribute some himself. The verdict is clear: I side with Winward, you ought to side with Winward, and even the great Churchill sides with Winward.

Kind regards,
AAKASH AGGARWAL, LYON'S

P.S. Chang and I are on good terms (as far as I know), and I hope this letter finds him well.

DEAR SIRs,

Imagine my horror when I, absentmindedly wiping the desks at the end of a lesson, hear my beak remark on how the wipes are not biodegradable. I was, naturally, as concerned by this news as if Dave's itself were closing (and a dark day that will be). So I consulted three separate beaks from each of the *real* sciences. Each of them confirmed this most-distressing of news.

The average boy reading this now is likely thinking, "Yeah it's bad, but why does he (*insert colourful word here*) care so much?"

Well, take the Shells' timetable: there are two columns, each with four divisions with no frees; so, on a standard Monday there are 64 Shell lessons. At the end of each of these the desks will be wiped, either each boy cleans his own desk, or a few do them all. Let me be generous and say a few boys do all the desks with but five wipes. Therefore, each Monday around 320 wipes are used by the Shell year alone. For the whole week (factoring in half days) this amounts to 304 Shell lessons a week using a grand total of 1,520 wipes a week. And this is just the Shell year! For the whole School I can multiply by four (not five, to allow for frees, exeats etc.). This equates at roughly an astounding 6,000 wipes a week consumed in lessons alone (and this is a conservative estimate!). So why should we care? Because this is practically an industrial-scale supply of non-biodegradable wipes being sent who knows where, but we do know is that they will be here for a long time yet.

I am not saying we should stop wiping our desks as it is an excellent way of preventing infection: simple and effective. Entirely stopping the practice is as likely to go down well as a spam sandwich. I just believe there may be a better way to do it, perhaps with a biodegradable material? For instance, I hear of bamboo wipes. Has the School considered these?

The School has gone above and beyond to prevent the spread of the virus here; the evidence is that we are still here. It is unrealistic to think that during such a time of crisis as this no other areas of concern will suffer. I am simply trying to bring this to light in hope an alternative solution.

Respectfully,
ARCHIE KYD, THE PARK

DEAR SIRs,

Very good to see some fine entries in the National Poetry Day competition.

I very much enjoyed the entry from Mick Broadbent.

At first blush, it seemed basic and a little ordinary, but after several reads I thought there was more to it than that.

Bearing in mind that Mick rarely composes an address on an envelope, I was quite surprised to read his entry.

Perhaps he could be persuaded to write his own weekly poem?

Yours sincerely,
NEIL PORTER

DEAR SIRs,

I much enjoyed the poems submitted for National Poetry Day (17 October), by boys and beaks alike. It was marvellous to see ideas of such force and depth presented in the 12-word straitjacket issued by the judges: all were, as Hamlet has it, bound in a nutshell, yet kings of infinite space. SWB's contribution to the competition, the delicately wistful *My Perennial Daffodils*, reminded me, of course, of Wordsworth. This was not due to any shared subject matter between the Lake Poet and the Canadian Theologian, given that the North American bard's piece was clearly a retelling of Echo and Narcissus. Rather, the similarity had more to do with prolixity, a quality that the great Romantic (I'm talking about Wordsworth now) had in abundance, as anyone who has slogged through both the substantively identical 13- and 14-book versions of *The Prelude* will know.

SWB's poem, much like my own execrable attempt to describe the view from St Mary's on a misty and very Romantic 'morn', made use of a compound adjective. Two, in fact. But whereas I myself had originally tried this before – aghast at my own gall in trying to pretend that these grammatical contraptions count as one word – having to shorten and therefore butcher my own petite tentative, SWB felt no such self-shame. His poem is very clearly 13 words long. I leave the charting of any course of action to you, but write in confidence that the judges, and *The Harrovian*, will take especial care with any work he submits in the future.

Yours faithfully,
FSW

DEAR SIRs,

The article on Flora at Harrow (issue of October 10) gave me much pleasure, and I hope you will allow me to add a brief explanatory postscript. The trees your writer discusses so learnedly are actually the ones I gave to the School when I retired from teaching in 1996. It was the master in charge of trees who suggested that, since Shakespeare was my great interest, it would be fun to choose trees mentioned in his plays. Of course there are many references to oaks: young Orlando is spotted lying under a tree in the Forest of Arden "like a dropped acorn". Medlars are described as half rotten before they are ripe; and Mercutio makes a rude laddish joke out of them. Thisbe waits "tarrying in the mulberry shade". And of course it's well known that Shakespeare planted a mulberry tree in the Great Garden of New Place, his Stratford house. The house is gone now and so is the tree – it was cut down by a later owner, sick of the tourists who came to see it. But the Great Garden is still there, and in it a mulberry tree said to have been grown from cuttings of Shakespeare's own tree. It was splendid that you added a couple of photographs to the article and a joy to see that the trees are still flourishing. If ever the land has to be put to other uses, I do hope that the trees will be preserved.

Yours sincerely,
JEREMY LEMMON, OH AND SOMETIME BEAK, ELY

SPORTS

RUGBY UNION

On Saturday afternoon, in a competition full of flair, guile and skill, The Knoll were worthy champions of the Senior House Super 9s Touch Rugby competition, defeating Newlands in the final. There were also internal fixtures with the Yearlings and Junior Colts continuing in the Harrow School Super League, with some excellent touch rugby skills on show; the Super League across all year groups is now building to the Grand Final Day on the first Saturday after half-term. All boys should be commended for their outstanding approach to rugby this term thus far.

The team of the week for the Super League across the Junior Colts and the Yearlings was as follows:

1. Hector Rogberg, *Druries*
2. Zak Banton, *Newlands*
3. Ben Taylor, *The Knoll*
4. Mostyn Fulford, *The Knoll*
5. St John Smith, *Newlands*
6. Filip Edstrom, *Bradlys*
7. Charlie MacDowell, *The Knoll*
8. Awni Dajani, *Moretons*
9. Sam Winters, *Elmfield*
10. Sam Clayton Bennett, *Newlands*

SWIMMING

15 October 2020

On Thursday, the swimming squad took part, for the first time, in the second round of the Virtual Asian Schools League. This competition comprises the top 16 swimming schools in Asia and is organised by Harrow Bangkok. Going into this competition, analysing the times swum in the first round – many close to or better than our School records – our swimmers were faced with a challenging gala. Though we will not know the outcome of the virtual gala until all of the schools have submitted their times next week, it is worth reporting that were an impressive six school records broken. The Harrow swimmers once again rose to the occasion and offered their best performances.

The new School records:

<i>Shell</i>		
Adam Wong, <i>The Park</i>	1.08.84	100m breaststroke (breaking his brother's record)
<i>Torpid</i>		
Mark Zeng, <i>Elmfield</i>	31.14	50m breaststroke
Nick Finch, <i>Newlands</i>	26.83	50m butterfly
Nick Finch	58.61	100m butterfly (a record held since 2005)
Nick Finch	2.16.57	200m individual medley (a record set by him last week)
<i>Senior</i>		
Ethan Yeo, <i>The Head Master's</i> , (captain)	31.30	50m breaststroke

Ways to contact *The Harrovian*

Articles, opinions and letters are always appreciated.

Email the Master-in-Charge smk@harrowschool.org.uk

Read the latest issues of *The Harrovian* online at harrowschool.org.uk/Harroviaan