

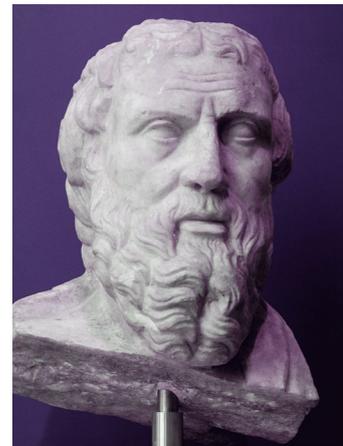
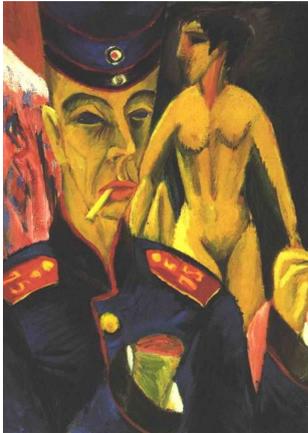


*Extended Project Qualification:  
Presentation Evening*

*Wednesday 6<sup>th</sup> November 2019*

*5:15 – 6:15pm*

*Putney High School  
(PAC)*



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## Welcome

We are delighted to welcome you to the sixth form EPQ Presentation Evening, 2019. Tonight provides our students with the chance to present the results of their projects, which they have worked on with incredible enthusiasm and dedication over the past year.

This booklet contains an overview of each student's project. The majority were completed in the form of a dissertation, but several students chose to create an artefact, expressing their research creatively in the form of a painting, garment, sculpture, etc.

We hope you enjoy chatting to our students and finding out more about the EPQ programme at Putney.

Dr Mellor,  
EPQ Co-ordinator

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## The programme for the evening:

4:15 – 5:00pm: students have displayed their posters around the PAC. Please feel free to go and look at the posters and ask the students any questions you like. They are looking forward to talking about their projects! Refreshments provided.

NB: Putney staff and students in Years 7-13 will be present until 5:00pm so the PAC may be busy, and parents of Year 13s are recommended to arrive from then.

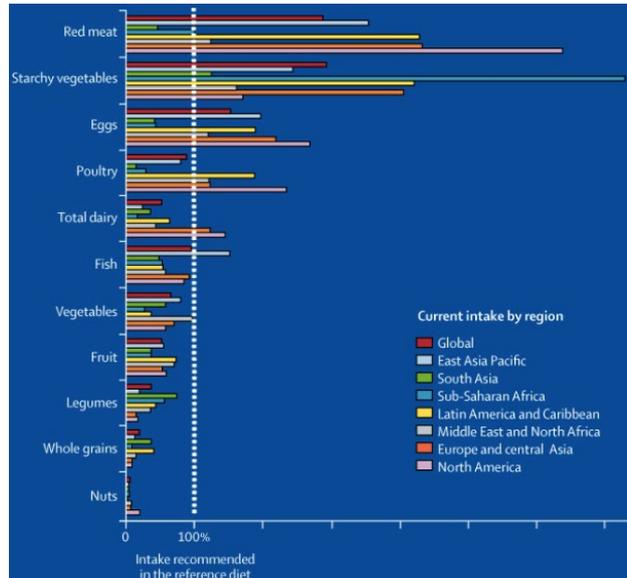
5:15pm: Please take your seats in front of the stage. Each student will give a one-minute summary of their project from the stage and then a small selection of students will give longer speeches, each 5 - 10 minutes long.

6:15 – 6:30pm: Students return to stand by their posters for further questions from parents.



**To what extent would a substantial increase in veganism across the world benefit the environment?** Madeleine Canning

This Extended Project explores the environmental impact of animal agriculture across the world and whether a substantial increase in veganism would benefit the environment. Veganism has seen a material increase in popularity in recent times with a 350 percent increase in the UK alone over the past decade. My interest in this topic stems firstly, from my own choice to become a vegan four years ago due to my belief that animals should not be used as a food source and secondly, my concerns about the damage being done to the planet by humans as a consequence of eating animal products. In my research, I will not focus on ethical arguments but instead seek to show the environmental harm caused by consuming animal products and the benefits to the environment that a switch to veganism could bring by analysing a range of materials. My findings clearly point to the conclusion that there would be a substantial environmental benefit if humans stopped or significantly reduced their intake of animal products.



**What socioeconomic impacts has organised crime had on Russia and Italy in the last 50 years?** Mia Clark

The purpose of my Extended Project is to explore what socioeconomic impacts organised crime has had on Italy and Russia in the last 50 years. Primarily I will identify the political, social and economic repercussions on the countries as a result of organised crime and subsequently, investigate the relationships between organised crime and any positive outcomes created in these areas. In this project, through the analysis of scholarly articles and books, I found a surprising amount of positive impacts as well as the economic more associated organised as political murder and is evident



amount of impacts as socio-impacts commonly with crime, such corruption, extortion. It that

organised crime will continue to be a part of our world and it cannot be seen more clearly than in both Russia and Italy. However, Italy has endured more as a result of organised crime. The choice of Russia and Italy allows me to make a comparison at the end of my research and continue to expand my title to see which of the three areas is impacted the most by organised crime.



**To what extent does Ovid's portrayal of rape and rape victims in the *Metamorphoses* differ from contemporary Roman attitudes towards rape of women?**  
Anna Coutts

This project aims to discover to what extent Ovid's portrayal of rape and rape victims in the *Metamorphoses* differs from contemporary Roman attitudes towards rape of women. I have worked towards this by building off of a paper by Leo C. Curran that argues that Ovid holds particular sympathy for female rape victims. I have analysed the *Metamorphoses* in Latin and in translation, and read other secondary sources on the *Metamorphoses* to help form my opinion. I have then researched contemporary Roman attitudes to rape and drawn comparisons between these and what I have gleaned from the *Metamorphoses*. These comparisons can be sorted into four categories: what is seen as rape, reasons for rape, damages done, and punishment and blame. Overall, I have

concluded that the *Metamorphoses* differs to a great extent from contemporary Roman attitudes by offering an intense sympathy and understanding of the victim's plight, something rarely seen in the time in which the *Metamorphoses* was written.

**To what extent is there a correlation between Green Space and Crime?** Jenny De Groot

The purpose of this project is to test whether or not there is a difference between green space and crime rates. To do this I compare areas that have a population between 100,000 and 200,000 so as to eliminate other variables that may affect the crime rate. Thus, a fair comparison can be made between green space and crime rates to see if there's a clear relationship. The hypothesis is that the amount of green space will increase the crime rate as a larger amount of green space increases the number of places that are not under surveillance. The number of witnesses in an area of green space is far less than in a residential area which also has the potential to increase crime rates. To test this hypothesis a Spearman's Rank test will be carried out. A scatter graph will also be produced so that the data can be seen to have a positive or negative correlation. These two statistical tests will allow a conclusion to be drawn as they give numerical evidence of whether or not there is a relationship between the data sets.



## To what extent is psychopathy an evolutionary trait? Jana Flaherty

I investigated how strong the links were between psychopathy and evolution by analysing the aspects of psychopathy and then how they benefit the psychopaths in evolutionary contexts. This meant that I could also see contrasts between clan structure during the evolutionary period and the modern day society that I wouldn't have seen otherwise. The

data and research that I collected, with varying aspects of psychopathy, such as impulsivity, to lead to self-destruction that was not considered beneficial for the species and hence not evolutionary. Contrasting this, however, were other facets of the psychopathic personality, such as manipulation, that most definitely benefitted them in group settings and increased status within the group.

## How and to what extent does Angela Carter evoke feminism in her Gothic re-write of fairy tales in *The Bloody Chamber*?

Maddy Faulkner

The fairy tale is part of an ambiguous yet crucial literary genre that has been subjected to re-writes and adaptation for decades. Angela Carter is an author whose fascination with fairy tales involves her aim of transforming the story to create a feminist version of the typically misogynistic plot frames. My focus is on the title story of 'The Bloody Chamber' collection which was inspired by Charles Perrault's 1697 'Bluebeard'. I will discuss how Carter changes the preliminary message behind the story by adopting a new narrative which sheds light on the female experience. I will look at the development of her female protagonist, the importance of her portrayal of female sexuality and how she attaches themes of the Gothic. My main aim is to show how, in the switch to a female perspective, and in the absolute focus on the female experience, within the Gothic genre, she transforms the story, showing the possibilities and benefits to literary adaptation.

## Which incentive do humans respond to most effectively – economic, social or moral?

Emma Flitcroft

In my project I explored the role of incentives and what impact the different kind of incentives can have on the real world. I evaluated the strengths and weaknesses of economic, social and moral impacts using research from academic papers and books to pick out data that demonstrates the positive and negatives. Strengths and weaknesses I considered were the relevance of different incentives, misunderstood signals that incentives can indicate and external factors such as different frameworks or the religious setting. My overall conclusion was that moral incentives are the most effective, but economic incentives are more widely used as they have more relevance to real world situations and have fewer repercussions.

## **To what extent did the Ratcliffe Highway Murders in 1811 have an influence on the introduction of the Metropolitan Police Act in 1829?** Polly Forrester



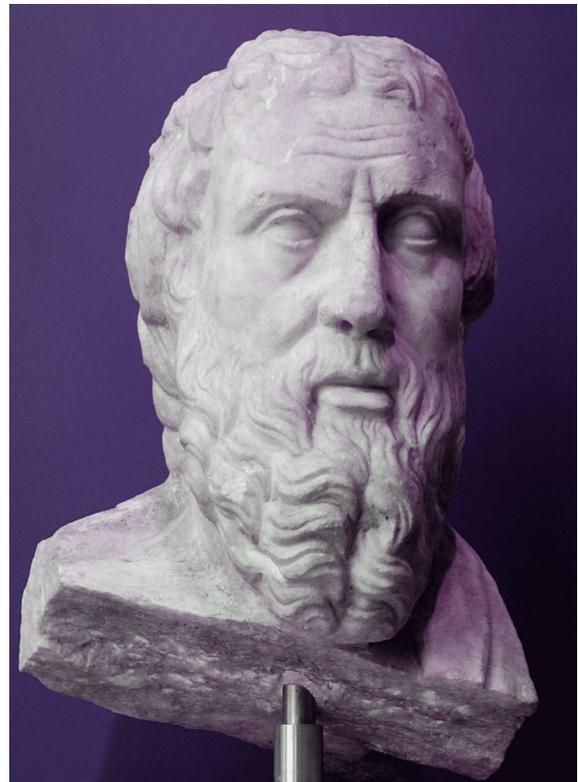
The Metropolitan Police Act of 1829 introduced a centralised and united system of police service, originally in London but later to the rest of England and her Empire. The Act constituted a revolution in traditional methods of law enforcement. The purpose of my Extended Project is to uncover the influence which the Ratcliffe Highway Murder in 1811 had over the introduction of the

Metropolitan Police Act eighteen years later. This murder is argued to be the first great modern mass-media sensation which it drove ordinary citizens from around the country to drive for reform. I seek to demonstrate the link the murder has to the introduction of the Act in the first place and argue that it was an extremely important factor in galvanising people and politicians alike to reform the police service.

## **To what extent can Herodotus’ “The Histories” truly be considered a history?**

Zoe Geall

Since the publication of Herodotus’ ‘The Histories’ around the year 425 BC, Herodotus himself has repeatedly been referred to with two titles of stark contrast: ‘Father of Lies’ and ‘Father of History’. The opposite extremities of each title highlight both the modern and ancient criticism of not only the apparent unreliability of his work, likely introduced by a lack of faith in the oral tradition in which he composed it, but also the reoccurring concept of whether or not ‘The Histories’ can be counted as a history or instead is simply a grand piece of ancient literature. Therefore, throughout my project I aim to reach a viable conclusion on to what extent can the works of Herodotus truly be considered a history, taking into account the general consensus of what differs a history from a regular piece of literature, as well as an analysis of the overall focuses of Herodotus and whether his frequent diversions from historical events in exchange for a more geographical, mythological and ethnographical approach diminishes the overall historical standings of his work.



## To what extent was Sarah Kane’s “In-yer-face” theatre influenced by Antonin Artaud’s “Theatre of Cruelty”? Kitty Goodman



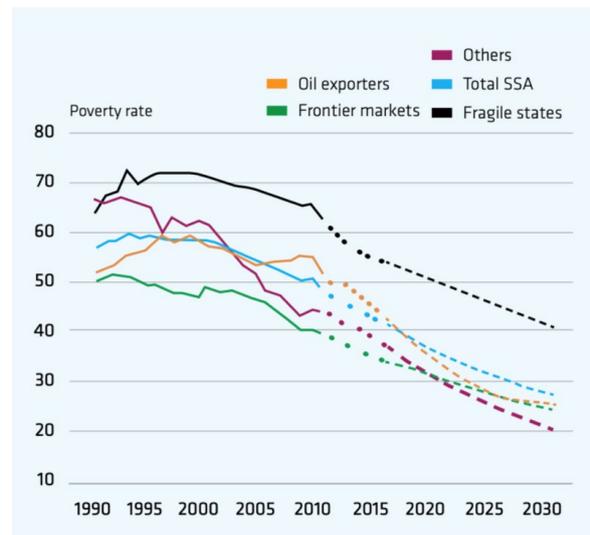
The purpose of my Project is to draw connections between two powerful theatre makers: Antonin Artaud (1896-1948) and Sarah Kane (1971-99) and in turn decide if Kane’s work was influenced by that of Artaud’s. I explored two different genres of theatre, the *Theatre of Cruelty* and *In-Yer-Face Theatre*, whilst also studying the political context behind Kane’s plays in order to reach a conclusion surrounding her influences. I examine the likes of Beckett, Churchill and Barthes in order to explore her other influences. I found that there was a progression in Artaudian characteristics in Kane’s work as it developed with her last play aligning most with what Artaud described in his *Theatre of Cruelty* manifesto in his book of collected essays: *The Theatre and its Double*.

## To what extent does globalisation hinder the economic growth and development of West Africa? Gillian Gyamfi

This project looks to explore the extent to which the growth of West African economies and the development of the countries has been hindered by globalisation. Globalisation has been described as a phenomenon whereby countries supposedly benefit from the increase of interaction between economies. However, over time it has become evident that the benefits of globalisation aren’t universal and that in fact, it has contributed to the increasing gap between the richest and poorest countries in terms of economics growth and development.

I consider both the positive and negative effects of globalisation on the determinants of growth and development and discuss whether it is in fact protectionism that causes harm. My research has led me to conclude that globalisation has ultimately been a significant contributing factor to Africa’s slow and poor development and will continue to economically marginalise the continent.

Figure 7.15 Poverty rates by SSA’s sub-groups, percent of total population, 1990 - 2030



## **To what extent does sleep-deprivation have an economic impact?** Emily Hindle

Sources addressing the importance of sleep in everyday life agree on the detrimental effects of insufficient sleep on the mental health and behaviour of individuals. This is shown to be due to both lifestyle-related and medical factors. The lack of synchronicity between modern routines and lifestyle changes in recent years are affecting the natural sleep patterns of human beings, resulting in significant impact on an individual and national scale. What is clear is the decline in workplace productivity and increased likelihood of workplace accidents resulting in direct economic impact to both companies and the national healthcare system. I will be presenting values for the monetary costs to nations' economies, and the negative effects of sleep deprivation of individuals that result in such losses.

## **To what extent did informal imperialism during the 19th century in Argentina, conducted by Britain benefit or harm their economy?** Francesca Horgan

This dissertation looks into the impact that informal imperialism had on Argentina, both during the time of the height of their influence in the 19th century, and their long-term consequences. This discussion focusses on the economic impacts, with acknowledgements of how other factors of cultural and political impacts both supported and exacerbated the way that the Argentinian economy was impacted. Informal imperialism is the unofficial influence over a country, without a formal empire being set up: in this case, the influence Britain had over Argentina during the 19th century. The informal empire in Argentina was common of the time in Latin America. This was due to many Latin American countries becoming economically vulnerable after revolutions in order to gain liberation from formal empires set up by countries such as Spain and Portugal, allowing influence from countries such as Britain, France and the USA. This discussion will consider not only the conventional means of considering the impacts, but also the different perspectives in Argentina, and the differing interpretations of the British in Argentina. Employing ideas such a Dependency Theory, specifically the neo-Marxist interpretation, this discussion will also consider the impacts of informal imperialism due to the very nature of it, as well as the intentional actions of the British. Evaluating the different aspects of this will lead to the conclusion that while there are some certain short-term benefits to the British influence, they are outweighed by the harmful impacts on Argentina.

## **Write a short play examining the suffrage movement through a contemporary lens in order to portray a political message that modern audiences can relate to.**

Georgie Johnston

The aim of this project was to explore and celebrate suffrage theatre, which markedly contributed towards women's eventual enfranchisement, by writing a short play set in the midst of the suffrage movement at an Actresses' Franchise League meeting. I chose to explore the shame surrounding female anger, the need for unity between suffragists and suffragettes and the theme of privilege, all of which are ideas that can transcend generations. Though set in the early 1900s I still wanted my piece to be relevant to a modern audience,



specifically linking to modern feminism. In order to balance the rooting of my piece in the past with the modern relevance I used a traditional and naturalistic writing and directing style but littered references to significant modern feminist quotes throughout, and so I successfully achieved my aim to explore the suffrage movement through a contemporary lens.

### **To what extent has the leftist populist movement had a negative impact on Venezuela and Bolivia in the 21st century?** Calla Leverett

This project assesses the extent to which populist approaches by leftist leaders in Bolivia and Venezuela have had a negative or positive lasting impact on their respective countries. I have focused on Hugo Chavez, Nicolas Maduro and Evo Morales. At first I investigated this by looking at the concept of populism in general and the problems that can arise, but also at the opportunities it presents. I then looked individually at each leader, assessing

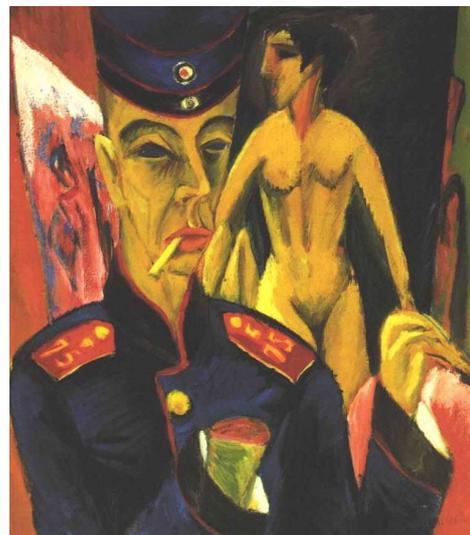


whether they have had positive or negative impacts on their respective countries. In doing so, I have looked at the longevity of the impacts and whether good policies will have a lasting impact. I have analysed the appeal of populism to voters who have been disregarded. I compared the outcomes of populism in these areas to each other and contrasted the extent to which they were successful. Ultimately, I came to the conclusion the power given to a leader by the people as a result of populism can be dangerous for democracy, but it can also be very important to reduce economic and social inequalities. We certainly see this in Venezuela and Bolivia, which demonstrates the contrasting extent to which populist leaders can be successful. However the flexibility of the populist movement means it is unpredictable and will always have varying levels of success.

### **How did different experiences and agendas affect the art of German artists responding to the First World War?**

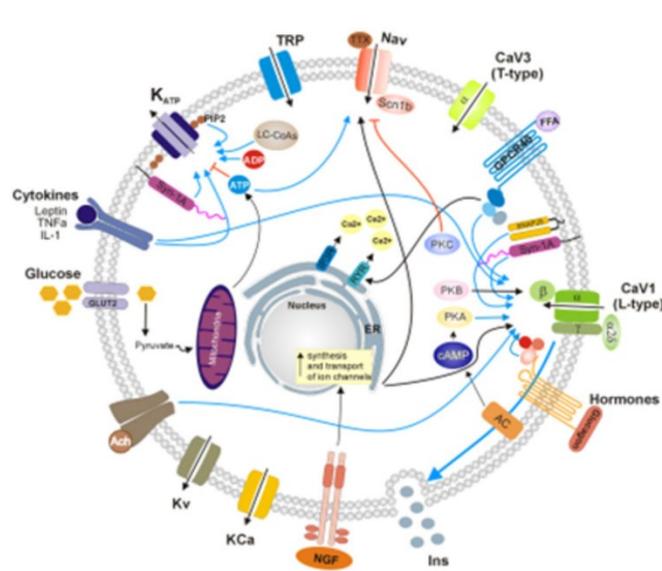
Anna Magere

I aim to evaluate the way that artists in Germany reacted artistically to the First World War and its aftermath. I will firstly be looking at the female artist Käthe Kollwitz and her depictions of the war from the homefront. I will then compare her work to that of her male contemporaries, some who fought in the war, in the case of Ernst Ludwig Kirchner and Franz Marc. I will also offer another perspective to the war by including government-funded official war art like that of Luitpold Adam. Its very nature meant that behind its creation was a very different intention than that of the aforementioned artists had in how the war was to be represented.



**To what extent does the composition of the human microbiome determine the likelihood of developing type 1 diabetes mellitus in children?** Issey Mais

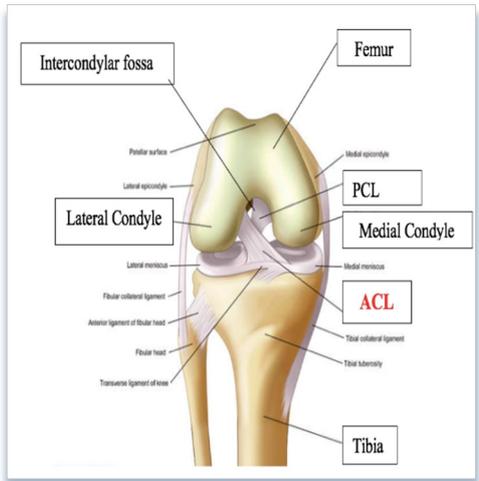
Diabetes mellitus is a chronic autoimmune condition that is a result of human antibodies destroying the islet of Langerhans cells, particularly the pancreatic beta cells, which play an important role in maintaining the blood glucose levels, since those affected are unable to produce insulin. The disease is characterised by hyperglycaemic symptoms primarily in children as their pancreatic beta cells are being targeted for destruction by the human body. The microbiome is predominantly made up of bacteria, viruses, fungi and protozoa. There are roughly 100 trillion microscopic living organisms inhabiting only the gut, with many more residing in other parts of the human body. Many of these microbes have formed a mutually beneficial relationship with humans working in many different ways to maintain the



functioning of a range of mechanisms in the body. I decided to investigate these topics to find a correlation between the classification of bacteria, viruses and fungi inhabiting the human body and the development of islet autoimmunity. By covering multiple possible causes of autoimmune diabetes I should be able to evaluate which of these factors show a coincidental relationship and which are direct triggers.

**To what extent do hormones affect human anterior cruciate ligament (ACL) injury risk?** Rosie Moorhead

This Extended Project explores to what extent hormones (testosterone, relaxin, oestrogen and progesterone) influence human anterior cruciate ligament (ACL) injury risk. Literature from a variety of published sources, alongside direct opinion from specialists in the field of ACL injury, were analysed and reviewed. The fact that female athletes are two to eight times more likely to sustain an ACL tear compared to their male counterparts, together with a higher incidence of ACL tears in female athletes aged 14-18 (when hormone levels are changing), is indicative of hormones as a risk factor for ACL injury. However, the lack of reliable evidence from research and direct opinion from specialists led me to conclude that there are multiple other, more preventable risk factors that have a greater impact on ACL injury risk.



## **Should medicinal cannabis be legalised in the UK?**

Hiba Al-Moosawi

My EPQ, on whether the use of cannabis should be legalised for medicinal uses in the UK, highlights the following key points: the pros and cons of cannabis, financial impacts of legalising cannabis, impact countries have had after legalising cannabis and the way the social stigma of cannabis influences why we are hesitant to legalise it. I want to focus my argument around these points as the debate of cannabis being a recreational drug as well as a medical drug has led to much controversy. I conclude with my personal opinion on the legalisation of cannabis in the UK.

## **To what extent should we allow the captivity of orcas and bottlenose dolphins for entertainment?** Alice Newsholme

My EPQ explores the world of captivity and entertainment within marine animals and more specifically the capture and treatment of bottlenose dolphins and orcas as they are the most widely captured animals. The argument that I explored for my project is a heavily debated one in the current climate and it has involved governments and legislation to try and resolve it. I wanted to explore the current situation surrounding this argument but also explore the history around marine captivity and how the argument has developed over time. To explore this argument I included a number of case studies in my discussion to help provide a wider understanding of the argument and implement my discussion into real-life events. My research points me to the conclusion that we should not continue to allow the captivity of orcas and bottlenose dolphins for entertainment, due to the brutality and inhumane nature of capturing these animals and marine parks harming and using animals for financial gain by entertaining the public.



## **To what extent does our gut microbiome influence mood and behaviour?** Misha Patel

The human gut microbiome is composed of trillions of microbes, from bacteria and viruses to fungi and protozoa. Over the last decade we have begun to uncover the massive role these microbes play in our lives. I will explore the extent to which the gut microbiome is able to influence mood and behaviours. In order to do this, I will look at the gut-brain axis as the pathways of communication between the gut microbiota and the brain and discuss the use of enteric and central nervous system interactions, neuroendocrine signalling molecules and the immune system to enable bidirectional gut-brain interactions. I will also consider the relationship between these microbes with stress and mental health disorders that can affect a person's emotions and behaviour, specifically looking at autism spectrum disorder and anxiety and depression. By looking at the relationship between the gut microbiome and these diseases I will be able to fully assess the extent to which the gut microbiome is able to influence mood and behaviour. Subsequently finding out how our gut microbes can impact who we are.

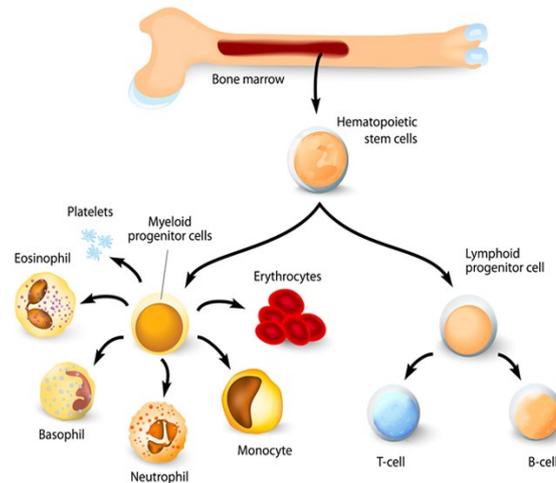
## Autologous Haematopoietic Stem Cell Transplantation: the way forward for treatment of multiple sclerosis? Isabella Penny

Multiple sclerosis is a chronic autoimmune disease which attacks the central nervous system and affects an estimated 2.5 million people worldwide. Over the past 20 years, both the cause of and a cure for MS has eluded scientists, despite increased funding and ever-improving treatments. This project examines the efficacy of Autologous-Haematopoietic Stem Cell Transplantation ('Auto-HSCT') as a treatment for MS and, specifically, its impact on relapse rate and disease progression. Auto-HSCT is a radical treatment involving the removal of undifferentiated stem marrow followed by

The purpose of this reboot the patient's dissertation considers stem cells, the way in and their effect on the Autologous

of two types of specifically involves own stem cells taken This method will be Disease Modifying using data from trials Consideration will be

DMTs most commonly used for each type of multiple sclerosis and the way in which they work inside the body. DMTs are generally believed to pose a much-reduced threat to life but are not as effective as HSCT. This dissertation debates whether HSCT should be a treatment more readily available to greater numbers of multiple sclerosis sufferers and whether it should, in the future, become the primary treatment for multiple sclerosis.



cells from bone subsequent reinsertion. technique is to seek to immune system. This the procurement of which they are treated body upon reinsertion. transplantation is one HSCT: this method the use of the patient's from bone marrow. compared with current Therapies ('DMTs') from across the world. given to the different

## To what extent does child labour have an economic impact on developing countries, with a specific focus on the Democratic Republic of the Congo? Sylvie Phillips

This EPQ explores child labour and examine the extent to which the positive and negative economic effects have a significant impact on countries, both domestically and in regard to foreign affairs. According to the United Nations at least 218 million children are involved in child labour, many full-time and with exploitative pay of under 20 cents daily. Research on children in



part-time intensive labour, shows a negative correlation between this hard labour and school attendance. The tiring work results in the abandonment of education by many children under the age of 14, an age where children in developed countries are in mandatory full-time schooling. Child labour occurs predominantly in developing countries, through lack of enforcement of laws, and because of a prominent demand for young labourers to assist the economy's development.

**Design and manufacture a product inspired by the work of artist and designer Benjamin John Hall ( → ) Catriona Powell**

Benjamin John Hall is an artist and designer based in London, who is largely known for experimental footwear, working with film, illustration and performance to showcase his work. I chose to research John Hall as my designer for my project as



his work is very unorthodox and creative, combining traditional methods of production and design with creative and experimental functions or appearances. I have decided not only to make a garment but also make a short visual aid displaying the decorative techniques of my garment, inspired by John Hall's own videos of his products.

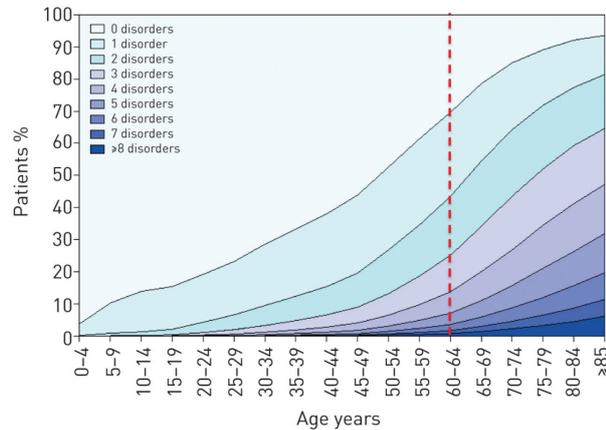


**Create a poetry collection to highlight a number of different global social, political and cultural issues threatening the well-being of our society through emotionally impactful poetry (“Through Our Eyes”). Lakshya Ravikumar**

Over the course of my project, I have written fifteen poems about environmental threats, different forms of prejudice, wars, morally ambiguous events in history and the current political environment. I address a diverse range of issues in my collection from the eradication of colonial literature from the ‘coloured’ perspective to the stifling oppression African-Americans face in the current prison system. Additionally, as someone of Tamil heritage, I have written about many ongoing social issues in India such as the nation’s fixation on bleaching creams in order to look ‘fairer’, the Kashmiri civil war and the violence that results from inter-caste marriages.

## How Must the National Healthcare Service Change to Improve Overall Care and Wellbeing for the Elderly in England? Mia Reid-Bashir

An ageing population presents numerous challenges to our nation; one of the most significant is the problems associated with healthcare. Our current healthcare system is not yet equipped to cater for the influx of older patients proposing great a great variety of ailments. The purpose of this project was to outline the key areas in association with care of the elderly in which considerable improvement is needed and identify how the NHS are approaching and instigating the necessary changes. Discovering that chronic care, integrated and more comprehensive care and cultural approach were the key areas of development, I concluded that with successful use of technology and consistent use of multidisciplinary teams, already introduced to combat the outstanding issues, we are on the right path to ameliorating healthcare for an ageing population.



## To what extent has the Indian government been effective in trying to reduce and combat human trafficking since 2000? Meera Robbins

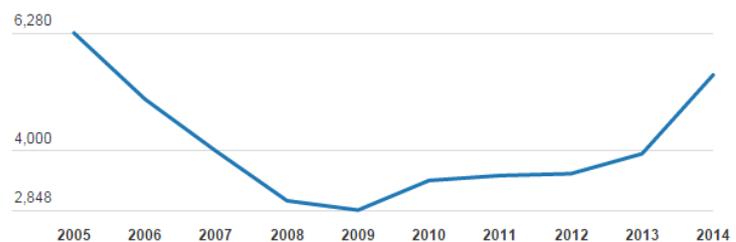


Human trafficking, though not an issue always at the forefront of politics, is nevertheless a significant one with much legislation in place to prevent it. Trafficking is a violation of human rights, exploiting a person or people for commercial gain, with people often forced or coerced into international movement, making it a global issue. The purpose of this project was to explore how the Indian government has been

trying to reduce and combat this crime by implementing different laws and schemes in the country. Furthermore, I compared these laws to civil society and NGO programs and saw which has been more effective in finding a solution. I drew on case studies of people who have been rehabilitated and highlight what needs to be done in order for this crime to be combatted. My findings point to the conclusion that the Indian government needs to have more rehabilitation centres and stronger enforcement of the current legislation to fight this abhorrent criminal offence.

Human Trafficking In India Over The Past 10 Years

\*Figures in no. of cases registered



## **What is the value of recycling in today's single-use society and why does the UK's recycling rate continue to lag behind?** Harriet Robson

Recycling is often overlooked as a method of improving the UK's plastic predicament. The media and other literary sources such as Lucy Siegle's *Turning the Tide on Plastic* frequently discuss small-scale methods such as purchasing expensive non-plastic items and decanting groceries into non-plastic containers. In my dissertation I argue that whilst these initiatives are undoubtedly proving helpful, prioritising them is not effective on a national scale as they are socially exclusive. Recycling is something we all have access to, and therefore the easiest thing to get right. Germany is considered to be the best recycler in the world. The UK is ranked the 10th best in Europe but Wales on its own has the 2nd highest recycling rate in Europe. There is a significant lack of uniformity in the UK's recycling system. Following Sir David Attenborough's *Blue Planet II* series in 2017, the discourse surrounding plastic waste has grown rapidly, to the extent that 'single-use' was the word of the year in 2018. The purpose of my Extended Project was to evaluate the importance of recycling as a method of cutting down on the plastic waste produced by our throwaway society and discover why the UK has a low recycling rate compared to its European counterparts.

## **To what extent is film an effective form of climate change communication?**

Daphne Sarkany

Anthropogenic climate change has been at the forefront of public discourse increasingly in recent years, as the situation is worsening and the damaging effects on our environment are becoming more apparent. It is clear that communication is required between scientists and the public in order to educate, inform, and catalyse change in our behaviours. One such way of communicating is through the medium of film. Together, the narrative, cinematography and sound design, among other elements, have an affective power which is capable of eliciting strong emotions and passing messages through the big screen to the audience. I seek to find out the ethics behind why we continue to over-consume finite resources, despite knowing the harm we are causing to the planet and to current and future generations.



I will also explore examples of Ecocinema: a genre whose growth parallels the increasing severity of this issue. Research points to the conclusion that film is an effective form of climate change communication to some extent. Whilst the affective nature of the medium can elicit strong emotions from the viewer, the dramatic scenes present in blockbusters and hard-hitting documentaries can lead to reduced understanding of the science or even complete desensitisation to the issue of climate change.

## **Will there be whales in 50 years?** Lauren Street

Whales are beautiful gentle giants which help to maintain a healthy ocean and planet, but are at threat of extinction due to human actions. There are a number of factors putting whales under threat, and urgent change is necessary to prevent losing some of the most majestic species on Earth. For example, North Atlantic right whales are predicted to be extinct in 25 years from now.

Whales have an important role to play in their ecosystems and their loss would greatly impact all over the globe. A single blue whale consumes up to 40 million krill per day, and without blue whales, krill would very quickly over-populate the area and use up its oxygen and nutrients. Sperm whales bring iron to the iron deficient Southern Ocean via their faeces and create a stable environment for other species.



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This dissertation explores the causes of declining whale populations and possible methods to rectify the problems we have created. Whales' extinction would affect marine ecosystems in all oceans, so it is a problem we need to tackle now to prevent any further damage.

## **An investigation into the role of wilful ignorance in politics and philosophy**

Ophelia Tavares

The willingness of people to simply bury their heads in the sand is a phenomenon that has been around for millennia but has arguably never been as public as it is today. The polarisation of politics has made fake news a frequent feature of some media outlets such as Fox News, making it easier than ever to read simply what you already believe. But wilful ignorance is not just an issue in politics, it also extends into the realm of philosophy. Philosophers such as Socrates, as long ago as 400BC, have explored concepts of wilful ignorance. Resurfacing with different names throughout time, wilful ignorance can be understood from a philosophical and moral perspective. However, the philosophies behind wilful ignorance are nothing without context. Though wilful ignorance manifests itself in many different areas and is even recognised as wilful blindness under the law, the most notable area by far has to be climate change. Climate change provides an interesting and provocative case study, due largely to its current political relevance, but also to the wealth of information around it.

## **Synthetic Food Dyes: Aesthetic, Harmful or Utterly Irrelevant?**

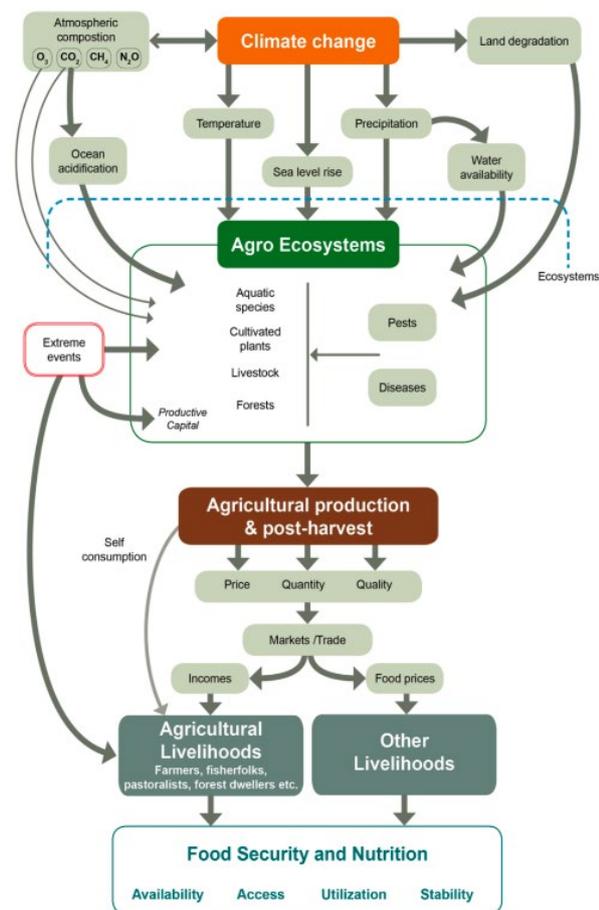
Rosie Thorogood

This extended project evaluates the use of synthetic food dyes to colour food products. I looked into reasons behind why we colour our food, including the origin of synthetic dyes, and also conducted my own investigation into colour's effect on taste perceptions. I also discussed the future of synthetic dyes, and the increase in use of natural dyes. I explained how consumer demands have become more complex in that what was once a purely aesthetic yearning for colour in their food, has become intertwined with an ethical yearning for a natural element to the food we eat, with no conscience of health negatives hanging over us.

## To what extent could the eradication of meat production help to solve world hunger?

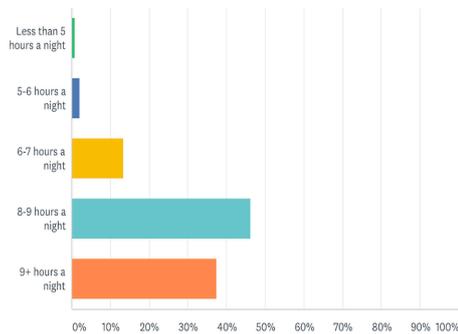
Lucia Wickham

This project explores the extent to which eliminating meat production would help to solve world hunger. 821 million people currently live in food poverty and the world population is predicted to increase by around 2.3 billion by 2050. Therefore, a sustainable method of feeding everyone must be found. Meat production is an unsustainable method of providing nutrition and causes hunger in a multiple of direct and indirect ways. Firstly, a significant proportion of grain is fed to animals instead of humans, which reduces the amount of food available for human consumption. Currently, enough food is grown to feed 10 billion people, suggesting that if grains currently fed to animals were instead fed to humans, there would be sufficient resources to provide the whole population with an adequate amount of food. Secondly, meat production is a significant cause of climate change as it produces greenhouse gases and causes deforestation. A warming planet has negative implications for food security. Thirdly, the production of meat uses significant quantities of water, contributing to water scarcity which makes it difficult to produce food. Finally, the unstable meat market often causes food prices to spike, which can make simple food items inaccessible to people on the poverty line. This project evaluates these arguments and establishes whether eradicating meat production could solve world hunger by stabilising food resources. It assesses the extent to which the challenges of eradicating meat, such as issues with nutrition, income losses, behavioural problems, and the consumption of unsustainable plant-based foods, would make the eradication of meat an ineffective solution to world hunger. Eradication of meat production would solve world hunger to a certain extent, but the challenges brought by wiping out meat consumption would make it an incomplete solution to the problem.



On average, how much sleep do you get on a weekend/during holidays?

Answered: 393 Skipped: 1



with a student's academic, extracurricular and vocational choices. Matthew Walker, a neuroscientist and professor, has conducted thorough research into why sleep has such an affect and while there is no clear reason it has been proven that sleep improves long term factual recall, increases 'muscle memory', and that even moderate levels of sleep deprivation can cause impairments in cognitive and motor performance equivalent to that of a legally alcohol intoxicated person. It has also been proven by Walker that sleep cannot be 'made up' – a common misconception among teenagers – and that a sleep deficit has cumulative effects which will continuously compound. My research in school found that 52% of students, myself included, sleep less than 8 hours on a weeknight (what is considered sleep deprivation) while this drops to 16% on a weekend.

## To what extent does sleep deprivation affect academic performance?

Sava Zeki

An article from 2012 revealed that high school students typically fall asleep at 11pm or later which results in only about 15% of adolescents sleeping for 8.5 hours or more on a school night. A study by Gilbert and Weaver of undergraduate Psychology students showed that over 70% of the students had what was classified as clinically poor sleep quality. This sleep loss can interfere

If you have an important exam the following day will you change your sleeping pattern the night before?

Answered: 394 Skipped: 0

