REAL & PESC Examples

1. When English is a global language, why study other modern languages? [REAL example]

As of 2017, approximately 14.4% of the world's population speak Mandarin, making it the most spoken language in the world. Although English is only the third most spoken language, it still remains a global language, being spoken internationally and even learned by people as a second language. Why then should English speakers worry about learning other languages when English is practically spoken everywhere in the world?
Regardless of the fact that almost the entire English language consists of words from other languages, there are various cultural, social and even economic benefits of being multilingual. In the words of Nelson Mandela, "**If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language, that goes to his heart."** Learning a foreign language increases our understanding and appreciation for other cultures and allows us to connect with foreigners on a personal level. This is beneficial to the world at large as it promotes tolerance and reduces discrimination.
Moreover, research has shown that there are cognitive benefits of being multilingual. People who speak more than one language tend to have increased cognitive development and abilities, as well as increased memory skills. This allows bilinguals to be better multitaskers, as they tend to perform better than monolinguals on exercises that require switching between two or more different tasks.
Further benefits include the fact that it literally pays to be multilingual. On average in the USA, bilingual pay differentials range between 5 and 20% per hour more than the position's base rate. In Canada, unemployment rates are lower for English-French bilinguals than monolinguals, and in Wales, employees who can speak both Welsh and English earn between 8 and 10% more than their monolingual counterparts. Therefore, speaking a modern language could be the one factor that differentiates you from your colleagues and enhances your income.

2. Can computers have a conscience? [REAL example]

A conscience is a 'moral compass', it navigates us through situations to differentiate between the supposed 'stringent' binary of right and wrong. It is assumed that consciences are strictly human, but are they simply a consequence of environment or an embedded system programmed into the human psyche?

At the beginning of a child's life, the strict, unsaid rules within society that govern behaviour, mannerisms and interaction are unknown. These infants exist in survival mode, with eating and sleeping constantly at the forefront of their minds. They do not have an appreciation for 'right' and 'wrong' – and these disciplines are taught throughout childhood. But does this mean they don't have a conscience?

Saturday Mthiyane is what the media titles: a "Feral Child". Lost in the South African Jungles, he spent his first 5 years of infancy in the company of monkeys and apes. 10 years after his discovery, he still refuses to adopt these 'societal rules' that maintain the orderly conduct in our human world as he continues to behave violently: climbing around on objects, running on all fours and beating other children. His behaviour directly contradicts the alleged definition of 'having a conscience'. Based upon this report, we assume that consciences develop depending on exposure to certain environments.

Infants act mechanically – they feed and sleep in routine. This routine alters as they operate as a result of their surroundings. Similarly, computerised machines – immediately after creation – can only perform simple tasks. However, with advanced technologies, extensive memory systems and the integration artificial intelligence, they too are learning to adopt human behaviours as a result of experience. If computers are advanced enough to self-develop, then we cannot deny that sense of right and wrong, that a 'moral compass' will come with exposure to human environments, just as children do.

3. Do we ever learn from history? [PESC example]

To whom does 'we' refer? We as a society, an aggregate of people united for patriotic and political purposes or we as each individual, a person distinct from their common society? The answer to whether we learn from history depends on to whom 'we' refers.

Society as a whole does not learn from history. Learning from history involves making changes to avoid making the same mistakes again. America's part in both the Vietnam war and the Iraq war demonstrates how society repeats history. America, only 28 years after the 20 year long Vietnam war ended, in which over 3 million people died, repeated history by initiating the Iraq war in 2003.

However, individuals do learn from history. The process of growing up involves learning from one's history. Cognitive development in children requires that they get things wrong in order to further their understanding. For example, when learning a new word, a child will use it in many different sentences and gauge the reaction of their audience to understand whether they have used it correctly. Eventually, the child will learn the appropriate use of the word, and thus will have learnt from their past mistakes.

Why, then, if we as individuals learn from history, do we as a society not? Ultimately, it must be due to the individuals with authority that history is repeated. For example, President Eisenhower would have learnt from his decision made in 1955, however, in 2003, President George Bush would have had no prior experience of the matter to gauge whether his decision was correct. As a result, America was part of another war in which many people died and history repeated itself. Therefore, history is reliant upon those authoritative figures to understand the mistakes of others to avoid making a decision that will inevitably lead them down the same path.

4. Do bankers deserve the pay they receive? [PESC example]

This essay shall argue that investment bankers **do** deserve the pay they receive – i.e. substantially higher than the national average. It shall consider three points: bankers create large benefits for clients; bankers on average work longer hours than other full-time workers; and that increased inequality caused by high banker salaries is mitigated by progressive income taxation.

The first angle to consider regarding bankers' salaries is who is paying them and why. Usually, bankers are highly-skilled workers employed by **private** investment banks to conduct deals for their clients; whether by raising funds, or advising them on acquisitions etc. Taking for example the US$30bn purchase of Actelion by Johnson&Johnson, assuming Johnson&Johnson's investment bankers Lazard reduced Actelion's purchase price by just 1%, that saves Johnson&Johnson US$300mn. The vast size of modern finance deals means relatively tiny improvements brought about by investment bankers results in large benefits for clients and thus high fees/wages.

Another aspect to consider is the average amount of hours worked. An average investment banker works 60-70 hours per week, rising as high as 100+ during busy periods. This is far beyond the 37.5 hour average work-week for full-time UK workers in 2016. As such, though bankers may enjoy a comparatively high annual salary, on an hourly basis bankers enjoy less of a premium.

Finally, it could be argued that bankers' high salaries may be viewed as unfair or excessive in wider society, possibly causing social tension due to widening income/wealth inequality. However, I would argue that improving the living standards of the very poorest in **absolute** terms is more important than worrying about **relative** differences between rich and poor. As such, given UK income above £45k is taxed at 40%, and income above £150k is taxed at 45%, high salaries mean bankers pay a higher amount of tax, **both nominally and proportionately**, which the government can use to improve the living standards of those on low/no income.

5. Which is more important: humanities or sciences? [PESC example]

What does it mean, to be 'important'? An endeavour can be important for a great many reasons. It can be important because it changes the lives of many, be that to a greater or a lesser extent, or it can be important because it changes the life of an individual in a profound way. 'Important' is a question of scale.

How, then, do the sciences and the humanities compare at scale? Well, to take one example, while Chemistry, Physics and Engineering allow us to fight wars, History and Diplomacy enable us to avoid them. In terms of their impact on society, the bare bones of the differences between the sciences and the humanities are not enough to differentiate their impact on our lives. We must look deeper.

A key differentiator between sciences and humanities is the presence of creativity, but an oft overlook rival is the nature of subjectivity vs. objectivity. That is to say: the sciences are correct, the humanities are not – they are personal. In 340 AD, Chinese alchemist Ge Hong discovered a cure for malaria. His notes were lost, and, eventually, forgotten. Skip forward to when Tu Youyou won the 2015 Nobel Prize for medicine using the same material as had Ge Hong, albeit refined. Who should be credited with this discovery? I can tell you one thing for certain – if you have malaria, you couldn't care less. Compare then, the burning of the Great Library of Alexandria at the hands of Julius Caesar. More than two hundred plays by by Aeschylus, Sophocles and Euripides: gone. There will be no Youyou for the arts. Once lost, they can not be recovered.

Ultimately, both the humanities and the sciences contribute unquantifiable good to society. As a people, neither one can be said to triumph over the other. But as individuals, it is our art that will continue to have made us when our science is remembered but we are forgotten.

6. Why do we need government? [PESC example]

In order to answer the reason for needing government, we must first determine which form of government is being addressed.

Government can mean a dictatorship, as can be seen in North Korea, where Kim Jong Un is Supreme Leader, with ultimate power over his government. Deemed a 'totalitarian' government by

the BBC, it has led to 'stagnation', and is accused of 'systematic human rights abuses'. Such a form of government clearly has its disadvantages, and is not considered as required in the West.

Instead, a democracy, such as one in the UK, might be considered 'needed'. Suffrage has been fought for, and finally won, by various groups of people, such as African-Americans in 1965, and women in the UK in 1918. But can we assume that democracy always results in good? As can be seen as recently as 2016, the right to vote can be harmful to society. Brexit, and the US election, are two of these examples. The EU referendum caused economic chaos when the pound fell drastically. On the other side of the world, the inauguration of Donald Trump, despite a popular vote for Hilary Clinton, has led to many being disillusioned with the US government and questioning whether it is truly 'democratic'.

This leads to the question: what **form** of government do we need? One that makes our decisions for us, or one that allows us to make potentially devastating ones ourselves? Unfortunately, this is a question that cannot be answered in the binary. Nonetheless, it is clear that 'government', in all forms, must be necessary within society. If it were not necessary, it would not be present.

7. Should pharmaceuticals be tested on animals? [PESC example]

There is no easy, straightforward answer to this question. Scientific rigour comes as a result of repeated testing on animals. If we are using an animal that has similar behavioural or biological drug responses to humans, we can make it easier to assess the viability of human trials.

It is important to establish trust between the science industry and the general public to gain political endorsement for the funding of research programmes that use animal testing to ensure products and drugs are safe for public consumption. Investment in drug and treatment testing is needed to develop more effective treatments for serious conditions which has a positive knock-on effect of keeping scientists in employment, thereby contributing to the economy through taxes and increased spending.

But in Western countries, many people feel a natural affinity with animals, often influenced by a culture of domestication. As such, people care for animal welfare and animal testing can be seen as ethically problematic. Some argue that the debate on animal testing should focus more on the manner in which researchers carry out animal testing. For example, the use of specific values such as the LD50 dosage required to kill half the group of test animals is often considered to be unnecessarily inhumane. Many critics of the LD50 claim that less extreme tests can be used while still achieving an acceptable level of scientific rigour.

Overall, while ethical issues are clearly important and should not be dismissed lightly, animal testing is undoubtedly essential for furthering medical research. While the debate over specific practices within animal testing continues, there is a clear consensus within the pharmaceutical industry that its use in drug development is paramount.

8. To what extent should we treat people suffering from drug addiction on a publicly funded health service? [PESC example]

Addiction is expensive on the healthcare system for psychiatric disorders, infections from contamination, road traffic accidents and loss of economic productivity through disability,

incarceration and joblessness. The pragmatic approach would be prevention and treatment rather than stigmatising and marginalising addicts through the justice system, saving on policing and prison costs. Notoriously, in London's financial and media sectors recreational hard drug use is rife; tests of sewage and bank notes attest to this. It is however the poor and marginalised drug abusers who tend to be used as examples. The rich can pay for treatment; but not the poor. This contributes to the increasing socio-economic divide and social immobility. Politically, a less equal society might be a less stable one.

Socially and politically, the blame for drug addiction has been placed on the individual for being weak or feckless or having a criminal mind. Culturally, the post-hippy and 60s experimental revolution has also left a long legacy, with "alternative" sub-cultures seeing drug-taking as positive and enlightening. Politicians and international conventions, however, hold a punitive stance in the face of moral lobbying. The individual culpable "choice" logic suggests that a publicly funded health service should concentrate on unavoidable diseases. Unfortunately, addicts and their health problems remain, so the health cost burden remains.

Whether we publicly fund treatment rests on our understanding of addiction. If it is true that taking drugs leads to addiction in a high number of cases, then why *didn't* the vast majority of Vietnam veterans who took copious drugs continue their habits after being removed from traumatic situations as Lee N Robins et al highlighted in their study How Permanent Was Vietnam Drug Addiction? Genetic studies suggest possible predispositions for some. If drug addiction was the result of genetic vulnerability or a coping mechanism for those living intolerable lives, then the moral imperative is to treat, rather than criminalise and withdraw help.

9. What purpose does the study of Classics have in our modern society? [REAL example]

"We shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender." Famous English words, but break them down. The anaphora of "we" fosters joint British identity at a time of discord, the abundance of monosyllables connotes a resolute strength and the fact that all but one of the words is of Old English origin is symbolic of national pride. When we listen to a good speech, it has emotion, it has logical reason and it has character – these criteria are not random, they are told to us by Aristotle when he discusses the art of speechwriting. But the point of dead languages is not simply to use big words and ancient authors to analyse speeches. The point is to see the grey area, to read between the lines, to look deeper. That only word which is not of Old English origin - "surrender" - comes from the French, a joke at our neighbours maybe? If Classics gives someone the linguistic ability to notice subtle jokes about the French, it must be relevant today.

Religion is another potential avenue to explore. Christianity first came to prominence in the Roman Empire, overtaking pagan polytheism. On a Sunday, slaves could go to church rather than work for their master – for a short time, they weren't oppressed or degraded, they were free. It was a new, radical change. Today, the church is a traditionalist force; for example, the Church of England regulatory body forbids the marriage of same-sex couples in a church, despite the legalisation of same-sex marriage in the UK. Suddenly, the same body that welcomed everyone in Roman times takes a stance to discriminate, to be less free. Is the shift the Church of England is facing in the younger generation, where only 2% of young adults identify as CofE, actually to do with religion, or rather to do with liberty and modernisation? The answer may lie somewhere in this grey area of parallels, the lessons of the past.

Most importantly though, someone should study Classics if they enjoy it. In today's very scientific and practical society, enjoyment can get easily lost in the labyrinth of use, purpose and method. If one person enjoys any one part of Classics, it still has a place. We should not read a book or watch tv thinking what is the point of me doing this, will it get me a university place or a job and what skills will it teach me.

So, in answer to the purpose of Classics, I've only suggested read deeper, question the world and voice criticisms where they seem valid. If we want to argue other subjects can do that too, we should take the vendetta to academia in general - a medical degree will teach you the theory to make you a good doctor, but it won't make you a perfect doctor when you walk in on day one. Academia kindles a set of transferable skills and ways of thinking to apply to whatever situation you are in, it teaches you to have opinions and to adapt them. Classics is one part of that – to me, it's not better, it's not worse, it is just the subject that I most enjoy.

10. Is it appropriate to represent consumers/producers as rational utility-/profit-maximisers in economics? [REAL example]

Rationality in this context is the assumption that economic agents systematically act in a way that maximises their utility or level of wellbeing. On average rationality is an accurate representation of human economic behaviour because people tend to avoid making decisions that harm themselves.

Adam Smith in his Wealth of Nations (1776) theorised that man's primary concern is the betterment of his own standard of living, noting that, "it is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest." This fundamental assumption prevailed until early 20th century, when Marshall and Edgeworth sparked the 'marginal revolution', which embraced the use of rigorous mathematical models to represent consumer and producer behaviour as optimisation problems solvable with calculus.

However, purely mathematical models tend to reflect how humans *should* behave, not necessarily how they *do* behave. For example, self-destructive nicotine and alcohol addictions, which lead to a lower life expectancy, contradicts the idea of not harming oneself. Also, people fail to save enough money for their retirement without government encouragement. Why do so many business founders believe their venture will be successful, despite the knowledge that 50% fail within 5 years? These examples defy the theory of rationality.

To tackle this conundrum, Herbert Simon in the 1950s introduced the idea of 'bounded rationality', arguing that while economic agents operate rationally in general, information and time constraints restrict people's ability to consider and optimise decisions across all potential consequences. More recent developments in Behavioural Economics have challenged the theory, but I believe they also incorporate systematic biases in human decision-making much like bounded rationality.

In conclusion, I believe models assuming the primary importance of self-interest are accurate on average. Also, the models can be applied to politics, where voters opt for candidates that they believe best represent their own interests. As long as bounded rationality is factored in, it is appropriate to consider consumers/producers as rational beings.

11. What evidence is there to show that humans are still evolving?

Evolution looks back on changes over vast periods, so it's very difficult to assess in real time. Some experts like David Attenborough in a 2013 Radio Times articles, argue that birth control and abortion and high birth survival rates mean that "we are the only species to have put a halt to natural selection". However, there are examples that appear to contradict this. Dr Randal S Olson analysed military records between 1820 and 2013 of Dutch, other European and US soldiers. In the 1800s, Dutch soldiers were amongst the shortest in the world but now they're amongst the tallest and there seemed to be a cultural reason for this in that Dutch women are more likely to select taller men to have children with. Meanwhile, in Framingham, Massachusetts study of three generations of women from 1948, those with certain lipid/cholesterol profiles had more children. It wasn't quite clear why this is, but it could be that healthier people can rear a child for a longer period of time. The problem is that we see evolution as only a competitive fight for survival, but other factors in terms of mate selection also play a part and we have to apply a different perspective, but it is still occurring.

There are also ethical issues around human evolution as we can now modify the genome. For instance, the Chinese have used CRISPR-Cas9 genome editing technology in around 86 trials in cancer patients. While we aren't modifying embryos currently, this would be a logical progression and we need to consider possible unintended consequences of determining our own evolution. During my obstetrics and gynaecology placement, I noted that we can now perform maternal blood tests for genetic diseases of the foetus, as foetal DNA passes into the maternal blood across the placenta. This information can then lead to a mother choosing to terminate. "Playing God" with pregnancies and modifying genetic deficiencies means we'll be driving our own evolution, and in this way human evolution will continue to occur in the future.