



HABS

GEOGRAPHICAL

ISSUE 15 SPRING / SUMMER 2016



FOCUS ON

INEQUALITY

Photo competition winners

Nirav Shah (Head of HABS Boys' Geographical Photography) writes...

For the Spring/Summer Edition we wanted to stretch students to be creative and think outside the box. There were two categories: 'Water on Mars' and 'Inequality', with an overall joint prize and a prize for each category.

'Water on Mars' was the basis of many of the most read news articles of 2015, and for this category students had to imagine they were a photojournalist taking a photo to add to a news story relating to something which doesn't fit into its surroundings.

'Inequality' can show any sort of situation where there is a difference in size or circumstances or a juxtaposition of positions.

Congratulations to our winners!

Overall winner: **David Guiloff (9C2)**



Water on Mars winner: **Josh Kaye (9R1)**



Inequality winner: **Daniel Surti (10S2)**




HABS GEOGRAPHICAL

I S S U E 1 5 S P R I N G / S U M M E R 2 0 1 6

Dani and I would love to welcome you to this 2016 Spring/Summer edition of HABS Geographical. This year we decided to address the topic of 'Inequality', a pertinent and contemporary geographical issue, that is becoming increasingly more unavoidable as the disparities between social groups in societies grow larger as a result of globalisation. We received a tremendous amount of high quality articles, to which we thank all those that submitted entries. We also had enormous help from all those on the Committee; thank you.

At this juncture it is worth emphasising that nothing could be possible without the work of Mr Bown and Miss Chidouh, who have worked incredibly hard to ensure the magazine is a success! Finally, we would like to wish you a pleasurable read and hope to see your article in the next edition!



Dani McCarthy (Year 12) and Gideon Daitz (Year 12)



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What is Culture?

GIDEON DAITZ (YEAR 12)

‘Culture’ can bind a society cohesively into one single, powerful, united entity, whilst also being the most prominent causative factor of fragmented, disillusioned and disengaged societies. So what is ‘culture’?

In whatever way we endeavour to define ‘culture’, there is general consensus among geographers and anthropologists alike that it involves aspects of human cognition and activity derived from what we learn as members of a certain society (bearing in mind that this learned behaviour is never explicitly taught). In 1871, Edward Taylor defined ‘culture’ as the *‘complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities acquired by man as a member of society’*. Taylor

focuses predominantly in his later works on the principles of knowledge and belief for he believes they drastically underpin all the other predicates of a ‘culture’ that he mentions. The way in which knowledge and belief are systemically formulated and fabricated through the process of observation and direct learning was believed by Taylor to constitute an integrated system, which would continue to ‘inform our sense of what culture is’. The term ‘culture’ is often used wrongfully in everyday diction as an adjective to



The Berlin Wall, one of the world's most infamous cultural divides.

Below: Typical Chinese food.

describe someone's lifestyle. If I described myself as an incredibly 'cultured' individual, you would henceforth assume that I regularly visit various art exhibitions in a multitude of galleries across the world, from the Louvre to the Guggenheim. Contemporary anthropologists argue that the term 'culture' is much more potent in its meaning than just a simple way to describe what someone gets up to on their weekend. John Monaghan, in his short introduction to 'Social and Cultural Anthropology' accounts a story that exemplifies what Franz Boas, a German born Jew, that emigrated to America fleeing Nazi persecution, argued to be the crux of 'culture'. Boas, fascinated by the idea that environment, cultural as well as the physical, had a determining effect on the way one views the world, explained that perspective is moulded by the culture that organically grows around us, allowing us to interpret meaning of our social lives, and framing action in them. This was illustrated perfectly by Monaghan's anecdote:

During a stay with the Mixtec people of Oaxaca, Mexico, John was trailing a group of tribesmen on a hunt. As he climbed up a small peak, he caught the site of all the men clustered around a beehive. They were tucking into the Mixtecan delicacy of 'bee larvae', at which point they turned around to John offered and apologised for not offering him first, John closed his eyes, opened his mouth and swallowed the piece. Reciprocating their

benevolence and hospitality, John had the tribesmen for dinner, serving them onion soup. When presented with the soup, they recoiled with disgust 'onions have a terrible odour and, if you eat too much of them it makes you stupid'.

This mutual disgust at little things such as eating habits, shows that categorisation is part of the work of culture, and is something that we do not do only with regard to food, but in every other imaginable domain.

As Claude Levi-Strauss concluded, culture is 'made up of rules of conduct, which were not invented and whose function is generally not understood by the people who obey them', culture is some sort of an elusive, ineffable enigma to define, yet it can possibly be understood through ethnographic, passive observation of the specimen's environment. ■





ALEX DAVIS (YEAR 12)

CULTURE, HOUSING & INCOME

The inequality boom in London

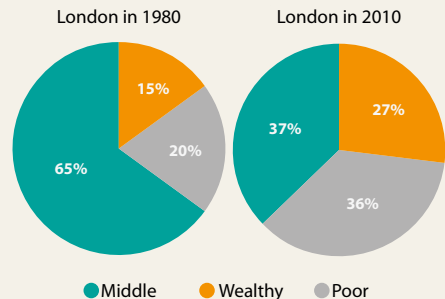
Inequality can be defined as the situation when some people in a society have more opportunities, income and money than others. This phenomena can be seen almost everywhere in the world, especially in London, but how does this affect the culture, housing and income of London's citizens?

Hampstead, Mayfair, Kensington and Knightsbridge - some of the world's most expensive property hubs located conveniently in London. These areas, stocked with tree lined streets, extensive personal "back-garden" forests, or deep sea basements, act as bait in the large oceans, where the World's richest and most successful lurk. However, despite London being the UK's most vibrant city, with a myriad of ethnicities, faiths and languages living side-by-side, recent studies by the Social Integration Committee have shown that there is actually less social mixing by age, ethnicity and class in London than in the rest of the country.

The contrast between London's rich and poor could not be starker. The top 10% of employees in London receive at least £1420 a week and

the bottom 10%, no more than £340 a week, a shocking £1080 pay gap. Whilst London's rich are 100% better off than they were 10 years ago, the poorest are paid below the minimum wage

The shift in ratio between three types of household in London between 1980 and 2010



using snide techniques and legal loopholes such as keeping tips on top-up wages. And it doesn't stop there, the supposed trickle-down effect from the City's financial markets barely provides aid to the middle-class; on average it would take a London couple with one child over 20 years to save for a deposit for a house.

The disparity in the capital of the UK is merely a microcosm for the ever-widening inequality gap that stretches across the World's most economically developed cities. For example in Rio de Janeiro in Brazil, there are heavily populated urban informal settlements, or slums, illustrating that there is a large housing inequality all around the world. Economic growth has caused inflationary pressure on the housing market and now the property wealth held by the poorest 30% is negligible compared to the £280 billion held by the richest 1%. The main cause of this is the inability of the HMRC to collect tax receipts causing a hefty tax gap that impacts heavily on public sector investment, namely the quality of cheaper housing available and the level of service and efficiency in the NHS.

Furthermore, despite being a global capital of culture, drawing visitors from all four corners of the planet, there are striking disparities in the cultural life of Londoners themselves. Recent figures show that 66% of residents from Kensington and Chelsea engage with the arts three or more times a year, compared to 29% in Newham. 59% of white Londoners have attended a museum in the last year compared to only 44% from BME* communities. Guaranteeing access to exhibitions and museums represents a substantial challenge to the many heritage boards and cultural institutions and should be pursued by John Whittingdale, the UK Culture Secretary.

Most importantly, the current government must nurture strategies and schemes to aid BME communities and the poorest percentage in their quest to enjoy the same prosperity and opportunities as the richest. By nourishing and sustaining these proposals, the big belly of the inequality gap will gradually diminish. ■

*BME = Black and Minority Ethnic communities.



Aerial view of Favela da Rocinha, the biggest slum in Brazil, showing the housing inequality in Rio de Janeiro

What has resulted in increased inequality across the UK?

ALEX COHEN (YEAR 11)

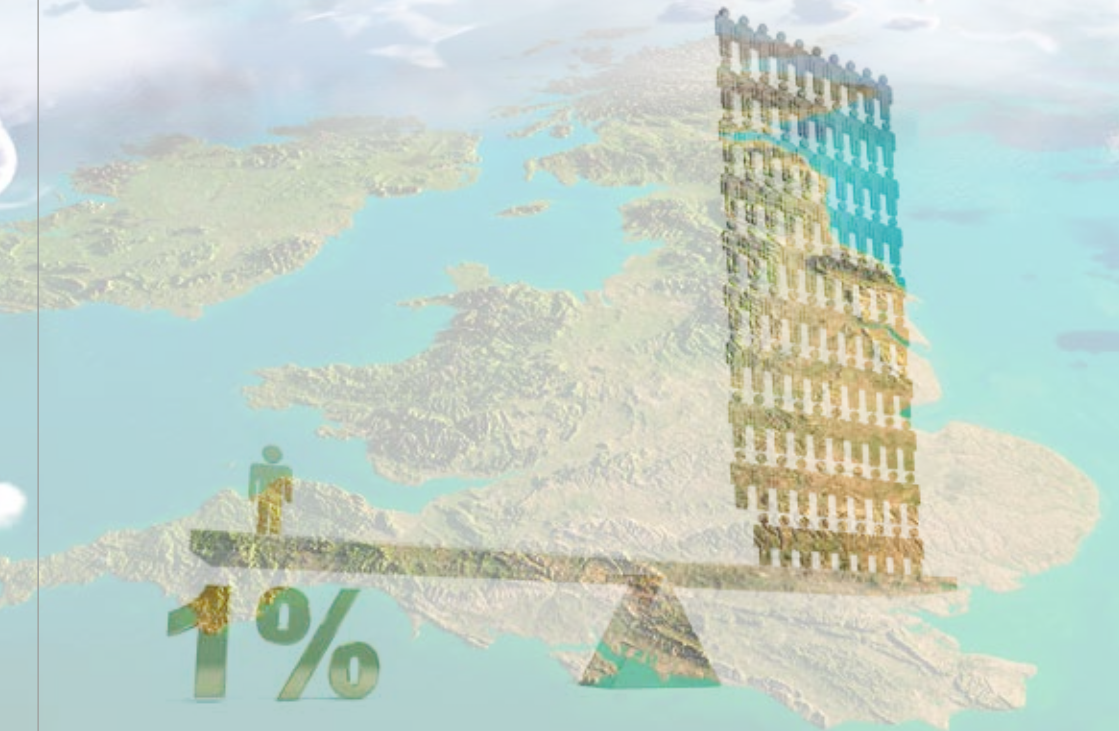
"An imbalance between rich and poor is the oldest and most fatal ailment of all republics."

- **Plutarch**

As of last year, the top 1% of the working population have incomes substantially higher than the incomes of those in the top 10%. Politicians have ranted on for decades about this problem and nothing has been implemented to help. This imbalance is historical and

complex, with its cause being deep-rooted in the foundations of society. However, a serious change is needed to make the population of the UK more economically equal.

What is troubling is that despite government efforts, inequality in the UK is



increasing. Why are the top 1% of earners pulling ahead from the rest of the pack? The following provide some of the reasons:

1980s and late 1990s saw a change in governmental policy; when Thatcher and Blair inhabited 10 Downing Street, the free market economy boomed. The financial markets would automatically correct themselves, so that there was no need for tight financial regulation and government intervention. As investment banks held depositors' money and knew the government would always bail them out to protect depositor savings, this false sense of security encouraged investment banks to trade and take risks with their own money in order to make a profit for themselves. This proprietary trading made bankers overwhelmingly rich, with money being stored away in Swiss bank accounts, rather than causing a positive multiplier effect on the British economy through heavy taxation.

The bank bonus culture born out of the last two decades, has paid out huge rewards to those in the financial industry, largely to reward the money-makers – but even when the banks have performed badly, banks have paid out big bonuses to keep the top talent. Although the European Union has capped bonuses through regulation, this has simply resulted in bankers receiving higher annual base salaries.

The recent Financial Crisis reduced the living standards of the majority of the UK's population. Real wages of the typical UK worker have fallen almost 10% since 2008. One factor is that banks have pulled back from lending to small and medium sized companies, stalling their growth, leading to lower revenues and creating a downward pressure on employee wages.

In recent years, the economies of BRIC countries such as China and India have seen rapid growth, with wealth concentrated in the



*...even when the banks
have performed badly,
banks have paid out
big bonuses to keep the
top talent.*

Financial Offices in Canary Wharf, City of London

hands of a few. Many of these elite are now choosing to invest in London real estate, the increased demand for which has pushed up London property prices. This has been great news for London property developers and high end estate agents but has made the average price of a London property unaffordable for the majority.

So what can be done? The UK government recognises that taxing the top 1% will simply force them to leave the country. Caps on bank bonuses and policies encouraging banks to lend will help. But ultimately, corporate management needs to spread the profits to employees through wage increases. ■



ABHIRAM BIBEKAR (YEAR 11)

Income inequality and the middle class in China

The booming Chinese middle class have developed an almost, irrational obsession with western goods and culture; seen as fashionable status symbols and part of family honour, these branded goods range from Versace to Aston Martin's. However in the context of a country where the poorest 25% make up less than 1% of total national wealth, this lavish culture causes major points of concern.

The release of "official" Chinese growth figures on 19th January has in recent weeks sparked a frenzy of prominent financial journals to proclaim in panic that the great Chinese economic meltdown has begun; figures released by the Chinese Premier state that China's economy grew only 6.3%, which is the lowest the figure has been in the past 25 years. While talks of total financial meltdown are somewhat far-fetched, there is no denying the fact that China's growth is beginning to plateau, and with this development, the nation faces serious problems ahead.

Amidst all this negative talk of decline, state figures contrastingly suggest that the

renowned Chinese middle class are still on the rise, both in wealth and numbers: urban household income increased by over 8% through 2015 and retail spending grew by an unprecedented 11%, specifically in the higher end goods market. However, while this might initially sound like a positive for China, the truth lies far from it: a recent study from Peking University estimates that China's real Gini coefficient is 0.49, which places it in the band of "very serious income inequality" as per the World Bank.

This dramatic increase in income inequality in the last decade has not come without



Above: The divide between the middle classes and the rural lower classes in China



Left: Shoppers queue for sought-after brands

pronounced impacts on Chinese society; it has been very well publicised in the western media the lengths to which the Chinese middle class are now willing to go to in order to satisfy their ever-growing desire for western brands and culture – some are going so far as to pay over £2,000 to attend afternoon courses in English tea etiquette. The roots of this fascinating fixation with everything western can be said to lie with the very nature of Asian society, where the aims of elevating social status and family honour are central to family life and are instilled into the next generation from a very young age. In an interesting development,

this consumer phenomenon has spread to a younger demographic; affluent Chinese teenagers have started to “flex” on their peers by wearing prominent western clothing brands such as Abercrombie and Supreme, and they pay prices which, from our perspective at least, seem extortionate as they include shipping and, in some cases, resell premiums on top of the normal retail prices. This also has tangible impact on the Chinese economy, as much of the disposable income created in the middle class is being leached in a sense to foreign companies rather than Chinese brands, which sends a bad image to both the aspiring classes, who will also aspire to western brands than be satisfied with Chinese goods and the global market, seeing as Chinese nationals with disposable income place such little faith in their own country’s wares.

These trends alarm the traditionalist Chinese ministers, particularly as they have been attempting to project the image of the “China Dream” – a vision of a cohesive, equal society, increasingly wealthy and healthy, and happily wedded to Communist Party rule. Furthermore their lack of any credible attempt in diminishing the blatantly increasing inequality though legislation has left many of the rural poor that make up the majority of the Chinese population disenfranchised with the state of their nation, as they see billboards reaffirming the existence Mr. Xi’s equal and just society on one side, and the unsociable and materialistic offspring of the booming middle class on the other side. Therefore the Chinese government is now at a critical impasse, either improve legislation to harness the growing middle class and appease the lower classes; or continue to brush the issue under the mat and prepare to face serious social and some economic tension in the coming years. ■

Wealth Inequality in India: A nation divided



ANIKET CHAKRAVORTY (YEAR 9)

Following on from **Raeman Banaik's** article on Indian inequality and poverty (Issue 14), **Aniket Chakravorty** recalls his recent trip to India, commenting on his experience and suggesting solutions to these issues.

Before visiting India in August 2015, I hadn't quite comprehended the profound wealth gap between those living in extreme poverty and the super-rich. This is caused by the urbanisation of poverty, whereby stagnation in the rural sector forces workers towards the cities – rural to urban migration – where they become underemployed members of the informal sector. It was sad to see an elderly man cycling with 40kg of coal into the city in return for a meagre fee. For these people, 20 rupees, or 20p, is a substantial amount of money, and yet, I have also seen households with ten bedrooms and five Mercedes parked in the driveway. In addition to the high Gini coefficient across the nation, there is an ever-growing middle class which have resulted from India's inherent entrepreneurial spirit.

So, let's consider the reasons for the immense wealth that divides India and how to close this gap in the future:

With development, there is almost always a differential between the rich and poor. However, in India, the wealth divide is extreme, being the highest of all the BRIC nations. The top 10 percent of the population control over 75% of the nation's wealth. One major problem is the level of corruption in India, whereby wealthy people are able to evade tax and pay bribes to the authorities in return for special treatment. Education also favours the wealthy, who are able to buy their children places at private schools. This hinders social mobility and hence maintains the gap between rich and poor. Other challenges facing the country are the levels of poor sanitation and a lack of public healthcare.

So, how can India begin to bridge the wealth divide whilst it is moving forwards with development?

There is no straightforward answer. However, I would suggest that one of the first



Children collecting rubbish for recycling in India. The lack of education for lower classes adds to the growing divide between the rich and the poor

steps is to introduce high quality free schools which would begin to enhance opportunities for the underprivileged. I would also attempt to introduce state-funded healthcare accessible to all. Corruption needs to be eliminated, ensuring that

a society exists where taxes are paid and those who are able to, contribute their fair share. Other areas that need to be tackled include guaranteeing that wages are adequate to support families and that working conditions are reasonable.

Investment in the public sector, together with growth of the middle class, will ultimately result in a better life for the less fortunate and disadvantaged families. India is closer to self-sufficiency than it has ever been and with a rapidly growing population, industrial and economic development has been made. Nevertheless, inequality is still a very prominent part of society which limits opportunities for the poor. Whilst there is much potential for the wealth gap in India to fade away, education and social mobility must both be addressed in order to lead India towards a brighter future. ■

The affluent Napean Sea area in Mumbai, home to many of India's super rich





How does poor healthcare cause income inequality in developing countries?

ADVAITH DOLE (YEAR 12)

Income inequality is defined as the extent to which income is distributed in an uneven manner among a population. **Advaith Dole** will be considering the lack of knowledge about healthcare, as one of the main causes of income inequality in developing countries, specifically looking at immunization. An example of a lack of knowledge would be regarding faith based spending by Kenyan families on HIV based preaching, despite the success of these forms of medication lacking any scientific backing.

The lack of knowledge about healthcare is one of the prominent causes of inequality in developing countries. This, coupled with an inefficient healthcare system, accelerates the ever spreading income gap. An example of this would be the belief in immunization in Udaipur, India. Immunization rates in the Seva Mandir, Udaipur are at 2.66%, compared to the state rate of Rajasthan being 27%, partly due to the religious beliefs in “*bhopa*” diseases: the idea that if a child is exposed in public within a year of his/her birth she will catch the “evil eye”. The immunization process itself requires several doses over a long period of time. Therefore,

they rely on the mother who is in absolute poverty, remembering on a regular basis to visit the local immunization camp. This can be especially hard, considering the other problems that parents who are living on less than a \$1 a day would have to face as well as the arduous distances of up to 10km that have to be covered for their child to be immunized.

It also relies on the efficiency of the nurses. In Udaipur, nurses were found to only be present 35% of the time. Therefore, many parents will not want to travel these journeys to access immunization camps if there is a low probability that a nurse is even there. A 40%



Women queue with their babies at a medical centre

...parents have to pay for medication, both in terms of faith based medicine and antibiotics, accounting for up to 10% of their income in Brazil.

rate for private healthcare does not bode too well either, but does provide an explanation for why the poor tend to visit private facilities accounting for 3-5% of the budget of a Pakistani family in poverty and 6% in India. Both of these factors combined together does provide a clear explanation for why 77% of children at the Seva Mandir received their first shot in the immunization program, but only 2.66% complete the course.

In developing countries, this “herd immunity” (80-90% immunization) does not exist and therefore immunization is of a necessity to prevent the contraction of diseases, and limited incentives in the short run have led

to these low rates of immunization. The lack of immunization creates a negative feedback loop: children become ill, therefore they drop out of school, this means they do not have the necessary skills and qualifications to obtain a higher paying job, and they do not have the knowledge to know how to get their own children immunized. This means that parents have to pay for medication, both in terms of faith based medicine and antibiotics, accounting for up to 10% of their income in Brazil. High interest rates from money lenders for the poor means that they are forever in debt to a select few in order to facilitate the medication for their family. This negative feedback due to imperfect information means that those in poverty can never accumulate wealth as they constantly spend on antibiotics rather than being able to make use of free immunizations programs being provided. The lack of educational qualifications means that they are never able to earn high wages, further increasing the income inequality in developing countries. ■

Slaves in Dubai:

The dark secret behind the city of dreams

ALEX JONES (YEAR 10)

40 years ago, Dubai was little more than a desert, inhabited solely by cacti, scorpions, and the odd camel. By the 21st century, it has become a thriving hub of activity, known for its extravagant nature, its opulent surroundings, and most famously, its gargantuan and excessive architecture.

Dubai has been dubbed as the Middle Eastern Shangri-La, an oasis in the barren deserts of the area; it is no wonder tourists from all over the West flock in the thousands each year to marvel at its modernistic beauty. However, in recent years, as many begin to question how cities like this have been able to spring up so quickly, an ugly truth has begun to unravel.

It is midday. A small group of men are clustered beside a small water trough, desperately pushing and shoving to fill their grimy cups with a small measurement of lukewarm water. Each of them are sweating profusely, their ragged company overalls caked with mud. It is boiling hot, over 45°C, a temperature deemed almost unsafe to even be

*A construction
Site in Dubai City*





A group of construction workers in Dubai City

outside, yet these men continue their labour, sheltering briefly, whenever they can, behind the thin shadows cast by the scaffolding of the construction. These men have no rest, working 12 hours a day, 6 days a week. They are in debt, forced to work in squalid, almost inhuman conditions each day, for employers who could not care less about their wellbeing. These people are slaves, the slaves upon which the whole of this nation's buildings have been constructed.

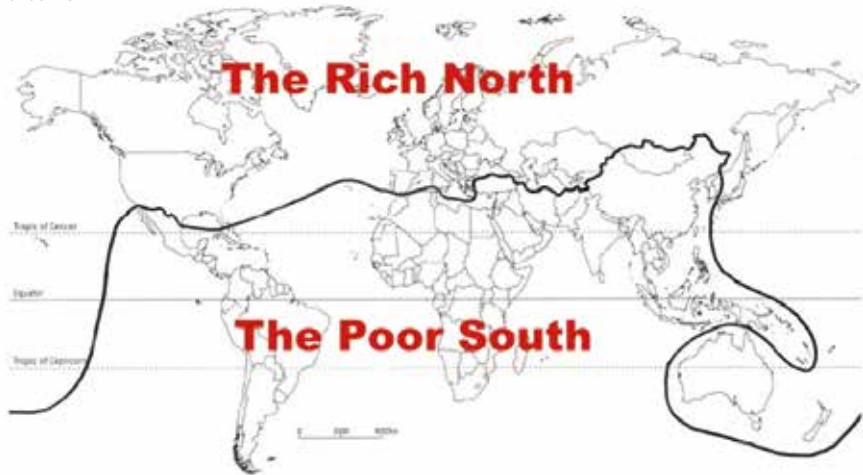
In recent decades, millions of Asians have immigrated to Dubai, in the hope of a new lease of life. Men are approached in their villages by agents of construction companies and are told about great opportunities to be had in the Middle East. The men are promised a high salary, enough money to send plenty back to their families, and provided for food and accommodation, all for the small fee of a visa and a flight. The sad truth is that for practically all of them, this will never become a reality. According to past workers who have managed to escape the vice grip of their employment, upon stepping off the plane, their passports are taken off them, their contracts ripped up, and their world is changed for ever. Men are forced to work for less than half the salary they are promised, having to take part in hours of backbreaking work in one of the world's most hostile climates. Some have described their

Men are forced to work for less than half the salary they are promised, having to take part in hours of backbreaking work in one of the world's most hostile climates...

camps as almost sub human in their nature; with no toilets, no clean water, sleeping quarters filled with up to ten people a room, and raw sewage overpowering one's nostrils. Even regular meals can become a difficulty to acquire, with the only food supplied by the employers being sporadic instalments of rice and bread. The majority of the time, workers are forced to scrounge and scavenge for whatever they can find.

Money is so tight, that none of it is ever returned to families back home. They live in abject poverty, such that that even if workers received their passports, they would not be able to afford the journey back home, being forced to pool all their income in simply staying alive. These slaves are trapped and bound, in an illegal and financially constraining manner to their employers.

Now, no longer do I see a city full of light, wealth, and promise. I see a nation built upon the exploited, broken and crippled backs of slaves. ■



Is Mr Brandt out of line?

WILL GARNETT SAMMONS (YEAR 11)

Will Garnett Sammons discusses whether the Brandt Line, which divides the world into the 'rich north' and the 'poor south', should still be drawn as it is; or if it should be redrawn in order to encompass the rapid development of various countries and the odd camel!

The infamous Brandt Line is an integral part of a geographer's life at HABS. Our first introduction was in Year 9, when development was introduced as a topic. The big question today, however, is whether this map has maintained its relevance in the ever developing socio-economic climate.

This imaginary line was first introduced by Willy Brandt in 1980 as an attempt to provide a (very basic) model to the development of the world. Brandt's aim in 1983 was to 'build a world in which sharing, justice, freedom and peace might prevail', yet the simple fact remains that, since the '80s, there have been minimal worldwide improvements.

Willy
Brandt



The issue is that by labelling a nation with a bland 'rich' or 'poor' status, you are putting up a major glass ceiling to their development: who would want to invest in a 'poor' nation? This 'branding' of nations acts as not only a symptom of the problem, but also a cause.

This issue of the Brandt Line, it must be acknowledged, is not necessarily true in all circumstances; especially when the past few decades has witnessed enormous growth of the BRICs, NICs, MINTs or whatever new acronym has been thought up. The flaw of the Brandt Line is that development is not necessarily revolved around economic

growth: Malaysia, for example, has a Human Development Index score of 0.779, a figure which falls into the same category as many 'rich north' countries. This inherent flaw is symbolic of a naïve western approach to development which has been prevalent in geographers over the past few decades; there is so much more to development than simple GDP per capita!

Whilst the Brandt Line should not necessarily be abandoned altogether because it does maintain a key value in offering a very basic model; this line must be renovated, updated and investigated in much greater depth so as to increase its use to geographers today. ■

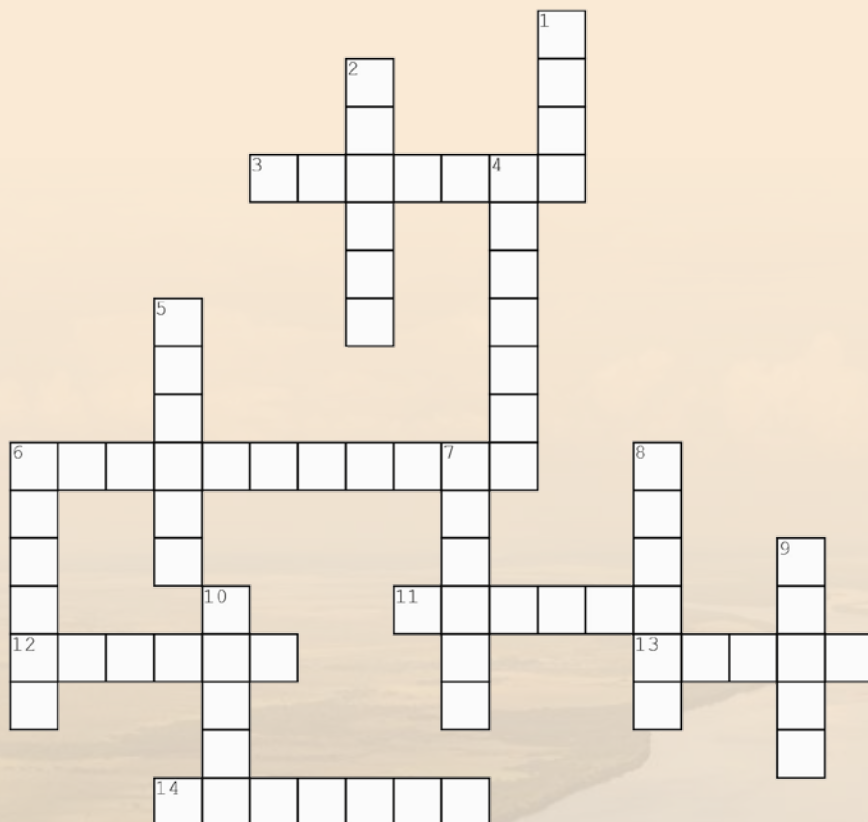


Habs Geographical Crossword

HABS GEOGRAPHICAL GIRLS' TEAM

with help from Elisha Kramer and Thea Kay

FAMOUS RIVERS



Across

1. The Three Gorges Dam on this river is the largest HEP station in the world
6. Largest river basin in the USA
11. Flows through 10 European countries
12. The river with the highest discharge in the world
13. The longest river in Germany
14. This British river has the highest waterfall on it

Down

1. The longest river in the world
2. Largest river basin in India
4. Victoria falls is located on this river
5. Captain 'Sully' landed a passenger flight on this river
6. Australia's longest river
7. The Itaipu dam is located on this river
8. The longest river in the UK
9. The main river used for transport in Africa
10. The longest river in Europe

EASY

1. Where is the driest place on Earth?
2. What is the only city in the world located on two continents?
3. What is the largest city in the world by population?
4. Out of Norway, Sweden and Finland, which is the only country not to border Russia?
5. Which country runs along the southern border of Afghanistan?
6. What is the capital of Nigeria?
7. In the state, Washington, D.C., what does D.C stand for?
8. Who is the President of China?
9. How many countries are there in South America?

MEDIUM

10. What is the name of the highest waterfall in the world, and in which country is it?
11. The Cliffs of Moher are located in which European country?
12. What is the only country in the European Union to have decriminalized possession of all drugs?
13. On the Human Development Index, which country is ranked 1st?
14. The River Danube empties into which sea?
15. Which country is thought to have the greatest inequality in the world?
16. What is the southernmost country in South America?
17. What is the oldest city in the world?
18. Which European capital stands on the river Aare?
19. The Mount Rushmore National Memorial is in which American State?
20. Which country has the lowest number of people per square mile?

HARD

21. What is the hottest temperature ever recorded on Earth? (To the nearest degree)
22. What is the name of the strait connecting the Pacific and Atlantic Ocean between Russia and Alaska?
23. What is the only county in Great Britain which has two coasts?
24. Which country has the youngest average age?
25. Apart from Warsaw, what city has the most Polish people?
26. On how many continents is there a city named Rome?
27. How many US states are larger than the UK?
28. How many time zones are there in the US?
29. How many provinces are there in Canada?
30. What is the least developed country in the world?

Answers to the Crossword and the Quiz on inside back cover.

HABS

Geographical

interview with Mr Munashe Mashiri

Mr Munashe Mashiri is the Head of Geography at St. Francis' College and moved to England from Zimbabwe.

What made you move from Zimbabwe to England?

A number of reasons, the main one being I wanted to travel and interact with different cultures and landscapes. I had been fortunate to have visited and gone on exchanges to a few countries. I also wanted to further my

Mr Mashiri outside his home in Zimbabwe



Mr Mashiri at the school for affluent pupils where he taught

professional development as well as earn enough money to support ailing relatives. I had a few options apart from England including the USA.

How valued is education in Zimbabwe?

During my time in school and long afterwards, education was the gateway to a successful life. Education would get you wherever you wanted to go. Families would make sacrifices and invest in the education of a child, particularly those who showed promise. An uncle and aunt of mine made great sacrifices for my education. The government at the time invested heavily in our education, giving grants of up to 80%.

Are girls and boys treated equally in terms of education?

There is parity at national level as there is no policy of discriminating against the girl-child. However, at the family level where resources might be limited, it was often that if only one child could be sent for further education it would be the boy. I suspect such attitudes shifted with time. I went to school with many girls and I sent all my siblings to

school and training colleges without thinking. Campaigns for the education of the girl-child did gain prominence. Universal, free primary education and health in the early days of the independence of Zimbabwe made education accessible to everyone, but the IMF-led 'Structural Adjustment Programme' since 1990 altered the situation.

What was the biggest change you noticed when you moved to England?

Universal free education, including secondary schools, but also the challenges in comprehensive schools versus those in public schools. There is a difference between emphasis on rights and not responsibilities, and how in England the teacher is expected to 'get students through' with limited expectation on students.

How does education differ between the rich and poor in Zimbabwe and how does it compare to England?

Provision of educational facilities differs hugely and thus attainment is affected. Access to basics of life is limited for the poor but those educated privately tend to have a lot of support from home to school and access universities

Poorer children demonstrating ploughing in Chihota Communal lands



overseas, including Cambridge, Oxford, MIT and Harvard.

Has Zimbabwe become more commercial and tourism-based in recent years?

I have not visited Zimbabwe in the last 13 years. There has been some disinvestment and floundering of many commercial activities and I suspect that although tourism continues to places such as the Victoria Falls, there have been macro-economic and micro-economic difficulties. This is the result of economic and political factors, both national and international. The drought this year will see further reductions in the country's capacity to feed the population.

How do jobs differ between the rich and poor?

The poor, if they have jobs, tend to be menial as factory workers, farm workers, domestic helpers or informal sector market traders. The majority are subsistence farmers. The rich have access to better paying jobs in the commercial sector. A significant number of the professional class have succumbed to the brain-drain to all parts of the world. Young people have spread themselves around the southern African region as migrants.

How important is the environment in Zimbabwe?

Zimbabwe has many very large protected wilderness areas, perhaps some the size of Devon and Cornwall. Some of the farms have more wilderness than arable land. Areas around water reservoirs are protected. Environmental consciousness is found in the axioms of the local languages. Population distribution in undesirable locations to which the colonial administration banished local people before independence in 1980 produced environmental challenges. With the redistribution of land in the 2000s, the impact is still to be assessed. The CAMPFIRE programme and the work of UNEP are helping. ■



"Hunting season is open and we as homosexuals are the hunted."

DANI MCCARTHY (YEAR 12)

Inequality in Russia

This is a quote from Ben Steele's fascinating documentary, *Hunted: The War Against Gays in Russia*. It was released in 2014 before the Winter Olympics and explores the way in which homosexuals are presently perceived in Russia, twenty-three years after same-sex sexual activity between consenting adults was decriminalised. Whilst in Britain over the past two decades we've seen a huge shift in attitude towards homosexuality, perceptions in Russia haven't really changed. Despite several laws being introduced, the majority of Russians still refuse to see homosexuals as human beings, let alone second-class citizens.

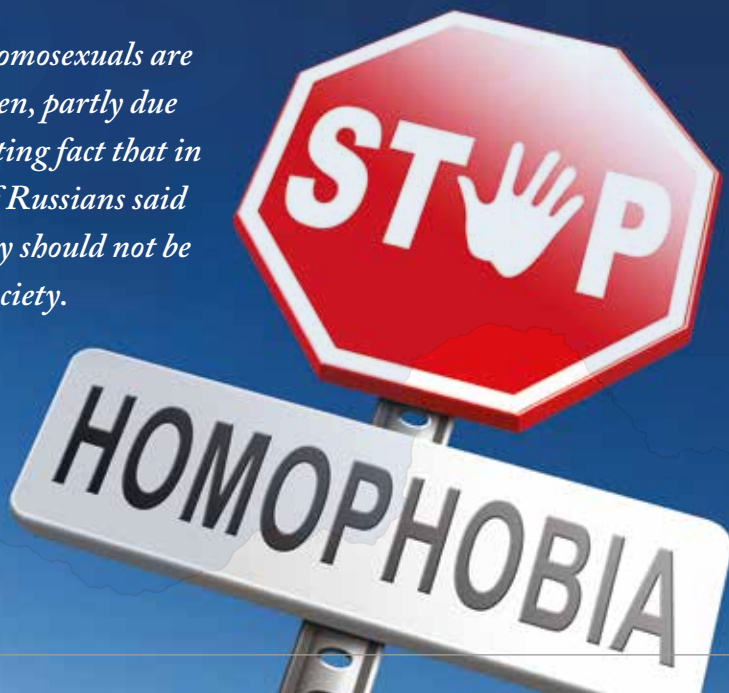
What does a man petrified for his life sound like? A man who is surrounded by violent human beings who want to beat him and humiliate him? It's very similar to a cornered-animal howl of a sound, a whimpering cry for help. This man is forcefully held down and asked multiple questions whilst being recorded on video. It will be released on the Internet and will destroy his life; he will lose his job, and probably most of his friends, but most importantly, he will lose any last sense of pride he once had. As if the vigilantes haven't made him feel humiliated enough, they continuously laugh whilst pouring urine all over him in the hope

that he will commit suicide after they release him. There is no sympathy for this man, just a group of callous, heartless, demonic people who want to make him feel as alone as possible.

There are many vigilante groups in Russia who see it as their job to make the lives of homosexuals a living hell. Currently, the largest group call themselves 'Occupy Paedophilia' – a bunch of cowardly, cold-hearted, violent men and women. They lure gay men into an apartment in St. Petersburg and take away all of their pride. Video footage of men being kicked and punched in the face, insulted and laughed at has been released so the world can see the real Russia. When it comes to these vigilantes, it's never one-on-one; these cowards travel with a group of accomplices to torture one gay man at a time, one after the other. One vigilante even said, "It would be ideal if instead of making us push homosexuals out of Russia, they could just take their own wretched lives themselves".

Homosexuality may have been declassified as a form of mental illness 17 years ago; however, religious associations and social attitudes are stuck in time. A shocking one third of Russians presently believe gay people should be medically or psychologically treated. For these reasons, Russia is considered as being the hardest place to be gay in Europe. Only 1% of homosexuals are completely open, partly due to the nauseating fact that in 2013, 84% of Russians said homosexuality should not be accepted by society. The situation is constantly growing in prominence; some are so afraid that they have migrated to more accepting countries in the West but some aren't giving up and risk their lives every day whilst fighting for their rights. Change happens in different countries at different times. We as humans are responsible for these changes and must decide whether we should adapt to them or if not we remain stuck in the past. ■

Only 1% of homosexuals are completely open, partly due to the nauseating fact that in 2013, 84% of Russians said homosexuality should not be accepted by society.





Inequality in Russia: a response

MICHAEL GALOGRE (YEAR 12)

"Down with the most regressive country in Europe, its barbarity to homosexuality will not be tolerated"

Whilst there might be some truth that the Russian government is not receptive to homosexuality, it is certainly a massive distortion to speculate that every ordinary Russian citizen, be they man or woman, takes violent and barbaric exception to homosexuals

in daily life. The legal enshrining of homosexuals' rights came with the decriminalizing of gay behaviour over 23 years ago. If Russia were genuinely so hostile to homosexuality, one would imagine that lesbians would also feel the Establishment's lash. However, the opposite



Russia is not given to flaunting its sexuality in public whether this be in the newspapers or on television. Thus, it is hardly surprising that homosexuality would be a hard pill to swallow.



prevails: lesbian behaviour has never been criminalised nor has this minority been (directly) singled out or assaulted.

One must be mindful that Russia's historically conservative ethos and traditional stance have made it somewhat impervious to integrating unconventional behaviour. However, one must be equally mindful that Russia is not alone. There are plenty of other European nations, like Italy for example, where homosexuality is seen as something distinctly dangerous and definitely frowned upon. We must also appreciate the context to harsh homosexual attitudes; Russia is not given to flaunting its sexuality in public whether this be in the newspapers or on television. Thus, it is hardly surprising that homosexuality would be a hard pill to swallow.

Vitally, Russia is slowly evolving, given its declassifying of homosexuality as a mental illness 17 years ago. Where liberalism once dictated the tune, it has only been compromised by the less-liberal approach of Putin. Thus, one could argue that it is not so much a societal issue but a politically-propelled one. Yet, despite this, in a recent LGBT event in St Petersburg, after a brawl erupted that was started by an anti-gay activist, the Police arrested 67 people. Not those LGBT noble campaigners but the majority (roughly 80%) who were anti-gay. This kind of softly-softly approach can only endorse the idea that (slow) progress is being made and hope is permissible that things could return to a more progressive ideology, in time.

Such emerging acceptance is writ large in the explosion of gay oriented businesses and communities flourishing in Moscow and St Petersburg including bars; discos or saunas. Likewise, two successful magazines dedicated to gay life, 'KVIR' and 'BF BEST FOR (M)' have been selling freely in stores throughout Russia. This would be tough to reconcile with an apparent appetite for suppressing pro-homosexual publications, showing that Russia isn't as tyrannical as some may believe! ■

Gender Inequality in the Arab World Economy

Actual Gender Inequality Index

women shouldn't
women shouldn't have rights
women shouldn't vote
women shouldn't work
women shouldn't box



women shouldn't suffer from discrimination anymore



unwomen.org

Why do Arab states lag behind the rest of the world in gender equality?
Achieving gender equality is a challenge for all states but especially for those that make up the Arab World.

Women in the Arab and Middle Eastern region of the world are, on average, more disadvantaged economically, politically and socially. Since the early 1990s, the Arab world has made considerable progress in reducing the gap between males and females in several areas, such as access to healthcare and education. Over the past two decades, almost, if not all, young girls in the Middle East Region attend school, with more women attending university than men. With this, maternal mortality has also declined by 60%, the largest decrease seen worldwide. Women in the Arab world are more educated than ever before.

Despite this, many Arab and international policymakers fail to recognise the benefits of women's economic participation and the fact that leaving 50% of the population out of the economic life of any country will have a negative impact on economic growth. Women in the Arab World have the lowest rates of female labour force participation globally. Although women are now more educated, they are still constantly faced with discrimination, legal and regulatory hurdles, lack of economic opportunities, poor working conditions and the lack of societal encouragement and support needed for them to access employment.

Arab women have the lowest rate of labour participation; 26% compared to a global average of 52%. Many Arab employers claim that the reasoning behind this is because

of the strict 'protective' labour laws, which make it costly for private sector employees to hire women. Arab state policy-makers have focused on areas such as International labour standards related to gender equality and non-discrimination, 'Decent Work for Domestic Workers', violence in the workplace and labour inspection into gender equality and non-discrimination in order to lessen the gap between men and women employment. However, this seems to have had the opposite effect as employers now see employing women as a hassle and increasingly difficult due to these newly implemented laws.

Social and cultural norms have a great deal to do with women's restricted access to the economic world. Unfortunately, until the representation of women in their society is changed, it will remain challenging for women to leverage themselves into the labour force and consequently the Arab world's economy. The Arab world is among the most unequal regions in the world when it comes to gender and, for this reason, a much-needed transformation of women's role in economic development and their empowerment is needed. The wastage of the human capital of women in the Arab world is something that needs to change. Women's entry into the economic and public life of their country is something that could start the shift into a more gender equal Arab world. ■

Healthcare is a Human Right

LI SHAN GUILLEMOT (YEAR 12)

‘He who has health has hope; and he who has hope has everything.’ In a world where we are increasingly vulnerable to diseases and epidemics, whether it be Ebola or the Zika virus, in the UK we are continually blessed to have such wonderful access to top-class healthcare.

In the last century, progress in medical research and improvements in medical technology have enabled the rapid expansion of medicine and the improving overall health of the world population. The global average life expectancy has more than doubled and is now approaching 70 years. However, even in the developed world, not all people are given the same access to high quality healthcare. In the past, factors that affected inequality in health standards in Western societies included overcrowding, poor sanitation and absence of local treatment facilities. These risk factors have all but disappeared in the industrialised world, so why do disparities in the healthcare of developed countries still exist?

An increase in life expectancy is often associated with higher economic standards. Despite the widespread availability of modern hospitals, not everyone is able to afford the treatment offered. This is particularly true of countries like the US where, unlike the UK,

people must either pay for their health insurance themselves or have their insurance supplied by their employer. Inevitably, this means that some people, particularly the unemployed, are left uninsured. In 2012 alone, 48 million people in the US had no health insurance, and for these people it is extremely difficult to access quality healthcare. In the USA, insured people have a wider choice of doctors, particularly specialists that they can consult. In addition to this, attitudes displayed by doctors towards lower-income patients differ from their wealthier counterparts, as those with higher incomes are more likely to receive better pain management and suffer fewer instances of medical errors. A study carried out by the University of Pittsburgh found that 27% of low-income seniors were given a medication they should not have received, whilst only 16% of higher-income patients did. Higher income patients are also more likely to have access to the latest medical



breakthroughs, either because they can afford to pay for it out-of-pockets, or because they have more comprehensive insurance policies that cover cutting edge treatments. We have to ask ourselves what kind of society we live in when we base the treatment of our patients on their income.

There are many other factors correlating with wealth that affect the health of a population including diet, exercise, smoking and alcohol habits. In general, wealthier members of the population are likely to be in better health than their poorer counterparts. Those from wealthier backgrounds generally take better care of themselves, as they have the means to buy healthier food, live in safer, cleaner neighbourhoods and, in general, are more knowledgeable towards damaging health habits. The importance of these factors to one's health has been demonstrated in a recent study of US citizens which revealed that 27% of low-income people smoke and 34% are obese, whilst only 12% of higher-income residents smoke and 25% are obese.

These figures highlight the worrying and shameful inequalities that take place within the health service, even in some of the wealthiest countries in the world. Understanding why inequalities in health have persisted, despite significant advancements in healthcare, is an important step forward in providing better healthcare to all sectors of the population. Whilst improving health is today an important social objective, there is also a growing consensus that improving health can have equally large indirect benefits through accelerating economic growth. It is therefore within a government's economic interest to ensure equality within the healthcare system, as improvements in health may increase labour productivity and school attendance, creating less strain on the government in the long term. The battle between the bourgeoisie and proletariat is not one that should be allowed to flourish in healthcare. The fact of the matter is that those who have health have hope and it is in our interest to create a healthy world and simultaneously a hopeful world. ■

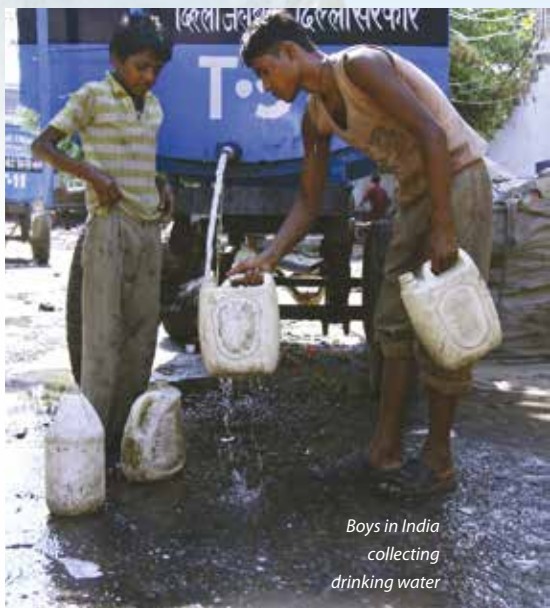
The Accessibility of Clean Water

THEA KAY (YEAR 12)

The supply of safe drinking water is a management issue that raises concerns about inequitable service provision, particularly in developing countries. Although several successful initiatives have been launched to supply safe drinking water to these populations, efforts still fall short. In developing countries, water systems are plagued by leakages, vandalism and illegal connections, whilst in developed countries precious water resources are squandered through greed and mismanagement.

The United Nations estimates that the average human needs 30 litres of water a day to survive – that's 5 litres of water for cooking and cleaning, and 25 litres for bathing. In Canada, the average person uses approximately 340 litres of water per day, that's the equivalent of 3 bath tubs. In contrast, in Africa and Latin America, the average person uses 3–5 litres a day, and that's the equivalent of a puddle of water at the bottom of 1 bath tub and the equivalent of what we used in Britain in the 19th century.

Right now, over 748 million individuals lack access to a supply of clean water; of these, the majority are people living in LEDCs. This figure does not include the number of people who are unable to afford water, who face prohibitive waiting times for collecting water, who receive water at occasional intervals or who have to collect water from dangerous areas. So what does it include?



*Boys in India
collecting
drinking water*



Women and girls collect water from a rain water pool. The water is then purified with tablets before use

Many people have to collect water from unprotected wells or surface water sources, often at a great distance from their homes, which deters them from collecting sufficient quantities. This particularly affects women who travel a long distance to get water for their families and the problem is made significantly worse during the dry season, when the water table drops, and rivers and shallow wells dry up. The combination of all of these factors severely stunts economic development.

However, there is a huge range in the level of economic development throughout the world, and in more developed countries the citizens have a very different outlook on the topic of clean water. Total water abstraction for public water supply in the UK was 16,406 mega litres per day in 2007, and this has only risen since. In England and Wales the economic regulator of water companies is

Total water abstraction for public water supply in the UK was 16,406 mega litres per day in 2007...

the 'Water Services Regulation Authority', the Environment Agency is responsible for environmental regulation, and the 'Drinking Water Inspectorate' for regulating drinking water quality. Put simply, we have companies that produce and regulate our drinking water; so we never have to risk not drinking clean water on any given day.

To further illustrate the consumption of water in the UK, here are some statistics:

On average, only 3% of our domestic water is used as drinking water.

Many people in the world exist on 10 litres of water or less a day, yet we use this in almost one flush of the toilet.

The average Briton uses the equivalent of 16 buckets worth of water a day. One third of this goes down the toilet.

This inequality is not present because there is not enough clean water, but because it is globally distributed in an unfair way. ■



Food Inequality and Insecurity:

How are we possibly going to feed the world over the next few decades?

LUCINDA KENNY (YEAR 11)

Today there are around 7 billion people on the planet and by 2050 that number will increase by more than 2 billion. As the number continues to grow, what is the reality we face in the challenge of feeding this ever-growing population?

Alongside today's problems of poverty and hunger, experts tell us that by 2050 we will, in fact, have to double the amount of food we currently produce in order to guarantee adequate supply worldwide. With the increasing use of croplands for production it is evident that huge additional demands will be put on our farms, which already have scarce agricultural resources.

Farming is also required to minimise its impact on the environment, due to agriculture currently being the largest contributor of greenhouse gas emissions from society. It collectively accounts for 35% of the carbon dioxide, methane and nitrous oxide we release.

38% of the earth's land surface is already being farmed; it is by far the biggest human use



of land on the planet. More importantly, the majority of that 38% covers the *best* farmland, with much of the remainder covered by deserts, mountains, ice, cities and other unsuitable growing areas. The few remaining expanses are predominantly located in tropical rainforests and savannahs, which are vital to the stability of the globe as stores of carbon and biodiversity, leaving no option for the expansion of farming into these areas. So, we are left with the question of how we will be able to double the amount of food we produce, when already one billion go hungry.

The world has actually long produced enough calories, around 2,700 a day per human, to feed the entire population. It is questionable how this is possible, but with as much as a third of the food that we produce being wasted along the food chain we can begin to understand why. The current system is neither environmentally nor economically sustainable; it is dependent on fossil fuels which results in environmental damage. It's geared to letting the rich with money eat well, whilst the remainder struggles to eat as cheaply as possible. Furthermore, the food for the poor will only become scarcer as increasing numbers of people can afford to eat well.

There are, however, huge opportunities to increase yields by using new technologies. New varieties of crops with higher yields are constantly being developed and improvement of farming techniques in developing countries can hugely increase yields. Other solutions include trying to shift diets away from meat so that crops can be used to feed people directly;

however, this idea is never very popular. It is also possible to reduce food waste, as roughly 30% of the food produced on the planet is thrown away, has gone off or is consumed by pests.

The challenge of feeding 9 billion people in a sustainable way is so great that it will have to require the reformation of current agricultural methods and countless people working together internationally. ■



Left: Industrial scale farming techniques, harvesting soya beans in Brazil

Above: Constructed from glass and steel, one of Dickson Despommier's conceptual designs of a vertical farm

38% of the earth's land surface is already being farmed; it is by far the biggest human use of land on the planet.



Voice for the Voiceless

HETTIE BROWN (YEAR 12)

This article is about the world's largest ongoing massacre – the exploitation and injustices of animal agriculture, aquariums, bullfighting, hunting, fishing, animal experimentation, circuses, racing and the production of leather, wool, silk and fur. Each of these acts take control of, diminish, and end the life of an innocent, sentient being, against their will, for the sole purpose of our (the humans) enjoyment.



I am writing this for the 56 billion farmed animals who are killed every year by humans, for the hundreds of millions of animals used as resources and research models every year for experimentation in laboratories, for the uncountable number of animals tortured in the fashion and entertainment industries, and for the fish and other sea creatures whose death toll is so great that they are only measured in tonnes, stripping them completely of any sense they may have had of being something other than a fish pie. I am a voice for the voiceless.

When deciding a being's rights, the question is not "can they talk?", or "can they reason?", but rather "can they suffer?". Most animals have nervous systems (the only multicellular animals that have no nervous system at all are sponges) and so have the ability to suffer in the same way and to the same degree that humans do. I believe they feel pain, pleasure, fear, frustration, loneliness, and motherly love – so why do we disregard any shred of empathy for them, and instead decide that they are *ours*? They are most definitely *not* ours. Every creature with a desire

to live has a right to live a life free from pain, suffering, and slavery.

We exploit animals in just about every conceivable way; for example an aquarium is a lovely name given to an aquatic prison, which confines thousands of marine animals, and denies them of their natural instincts – most fish possess spatial memories which allow them to create cognitive maps to guide them through the oceans and hence they suffer tremendously when unable to live in vast, open spaces such as their natural habitat, the ocean. What's more, it has been recently shown that fish suffer from the restrictive conditions in an aquarium and exhibit repetitive behaviour that performs no obvious function, such as "spiralling". An eye-opening documentary about this, which I would highly recommend, is "Blackfish". We assume that the marine animals are ours to control, simply because of the fact that they are "only fish".

When any assumption of superiority is based on race, gender, sexual orientation, or species, it is morally unacceptable. The comparison between our treatment of the species we decide to pick on and the species we

...humans would be extinct in roughly 17 days if we killed each other at the rate at which we kill animals.

love is disgusting – we look after and care for dogs and cats with all our hearts, yet kill over 3,000 pigs and cows in slaughterhouses every second. What gives the farm animals any less of a right to live than a dog or cat? Because they taste better? Contrary to popular belief, moral judgement is not determined, nor is it justified, by your taste buds.

To put into perspective the rate of murder – humans would be extinct in roughly 17 days if we killed each other at the rate at which we kill animals. We need to stop thinking of animals as resources, rather as our friends. By switching to a vegan diet, we can personally save the lives of thousands of animals in our lifetime, so make a change to stop this injustice today. They have no voice, so you'll never stop hearing mine. ■

One of the world's largest acrylic aquarium tanks in Okinawa, Japan



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COP22 reaches new agreement to tackle climate change

The recent conference held in Elstree, UK, saw delegates from 16 countries vote in favour of adopting a new resolution to deal with climate change. But is it enough?

On 1st February 2016, COP22 was held in Elstree in order for the international community to reach a settlement to reduce the rate of climate change caused by global warming. The conference also gave countries more vulnerable to the implications of climate change a voice in creating an all round solution.

Delegates from 16 countries, ranging from industrial powerhouses such as China and India to less developed countries such as Tuvalu and Mozambique, worked to create two resolutions each regarding CO₂ emissions cuts – keeping in mind the country's own expectations, but also trying to incorporate the needs of other countries.



Delegates from China giving a speech regarding their proposed resolution

Once countries had decided upon two final resolutions, delegates rushed to lobby support from other countries in a bid to receive backing for a resolution from 4 other countries. Within 20 minutes, several resolutions had received the required level of support and were put forward to the conference organizers. The resolutions from China, Nigeria, UK and Mozambique were finally chosen to be possible resolutions to be passed.

The UK gave an influential opening speech, proposing that aid is given to LEDCs by countries in the top 45 GDP per capita in the world. This was initially well received by the smaller nations, such as Haiti, Bangladesh, Tuvalu and Mozambique. The UK also urged more developed countries (i.e. OECD) to provide LEDCs with greener energy sources. Receiving the support of a range of countries, such as China and Haiti, the UK's resolution was a strong contender. At first, some countries, including Saudi Arabia, stated that countries with larger total GDPs should have to provide aid, because several smaller countries (i.e. Greece) should not have to give 1% of their GDP yearly, even though they have a high GDP/capita.

The Mozambican delegates took a different approach to the resolution, introducing a concept to reduce CO₂ emissions depending on the total amount emitted currently by a country. They expressed that countries that emit larger

amounts of CO₂ in total should be forced to make larger cuts. The Mozambican resolution stated, 'members emitting over 1bn tons of CO₂ per annum must cut emissions by 33% ... over 0.1bn tons must cut by 20%'. Mozambique has regular floods and cyclones caused by increasing global temperature, which pose a great threat to the economy. In the delegate's speech, they mentioned, 'the majority of cuts must come from countries that emit the most, but growth of smaller nations should not be restricted'.



The delegates from Mozambique answering questions on their resolution

Mozambique's proposed resolution prompted several questions from Tuvalu and Mexico regarding how LEDCs were expected to develop without international aid or support, to which the delegates stated that as there will be no restraints on emissions for countries emitting less than 0.1bn per year, development will be allowed to take place. However, some were still skeptical.

The Chinese and Nigerian delegates were the last to deliver their speeches, holding firmly that countries emitting over 8 and 10 metric tons *per capita* per year respectively, must cut to below that. This was met with resistance, however, as several countries, including the USA, believed that this was not substantial enough to make

a significant difference. The Nigerian resolution initially received support of 3 of the 4 BRIC nations (China, India, Brazil), and Mexico, showing the unwillingness of industrializing nations to make cuts to emissions, which would hurt their development.

A trend that was made clear during the speeches was that the developing countries, China and Nigeria, were not keen to cut their emissions which may limit their growth, China stating that countries 'must reduce CO₂ emissions per year per person to below 8.0 [metric tons]', which would mean that China, India, and several other large emitters would not have to cut emissions. Of the 16 countries in the debate, only 4 countries (Australia, USA, Saudi Arabia and Russia) would be forced to make cuts to emissions under this policy. The delegates from China and Nigeria were quick to argue that CO₂ emissions should be measured per person because accounting for population gives a more balanced view for the amount of CO₂ which should be allowed to be emitted by a country.

As the debate came to a close, the BRIC countries opted to support the UK's resolution, possibly because it still meant they would not have to cut emissions, and their growth would not be restricted in the future.

A FPTP style vote was held, with China and Nigeria receiving no votes each, Mozambique receiving 4 from countries including Haiti and Bangladesh, but the UK came out on top with 12 votes from a wide range of countries, resulting in its resolution being passed.

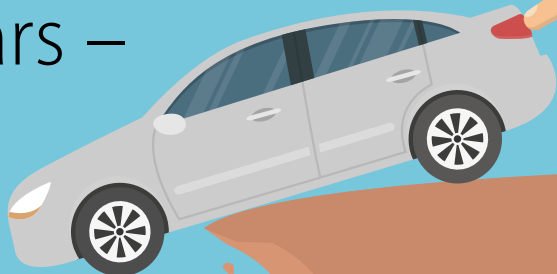
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LOOKING AHEAD: Electric cars – as good as we think?



After reading the book *10 Billion* by Stephen Emmott, **Eddie Gillow** was awakened to the complex process of manufacturing and amazed by how much goes into creating simple things.

EDDIE GILLOW (YEAR 12)

“But I have bad news about pyjamas. Because I’m afraid your cotton pyjamas take 9,000 litres of water to produce. And it takes 100 litres of water to produce a cup of coffee. And that’s before any water has actually been added to your coffee. We probably drank about 20 billion cups of coffee last year in the UK. And – irony of ironies – it takes something like four litres of water to produce a one-litre plastic bottle of water. Last year, in the UK alone, we bought, drank and threw away nine billion plastic water bottles. That is 36 billion litres of water, used completely unnecessarily. Water wasted to produce bottles – for water.”

Based on evidence similar to that above, Stephen Emmott argued that electric cars were, in fact, having a negative effect on the environment. He constantly made sniping remarks against the use of electric cars, claiming that if you look at their *life cycle*, they do more harm than good. Seeming like such an obtuse

contradiction, and extremely counterintuitive, I decided to do some further research.

Of course we can’t doubt that what actually comes out of an electric car is completely clean, but some scientists, including Stephen Emmott, are questioning their green credentials. They want to bring into question two main problems:

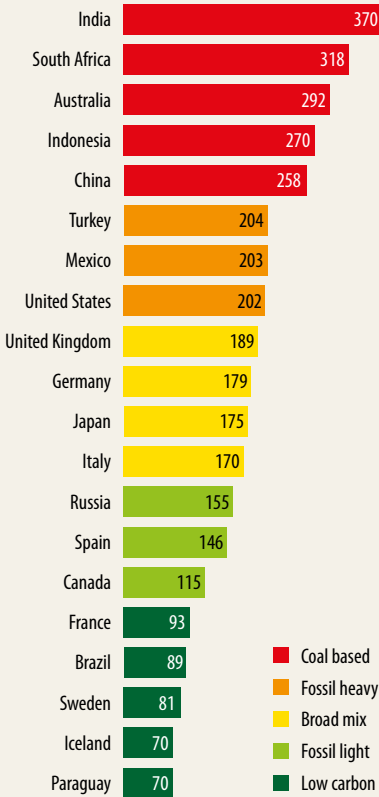
1. How electric vehicles (and their batteries) are manufactured.
2. How the electricity which powers them is generated.

When looking at these two criteria, in some cases we see that the production of electric cars can have a greater impact on global warming than conventional cars. To ensure that we reach a reliable conclusion, you must look at the entire life cycle of the electric car. Otherwise known as the “well to wheel” approach, scientists have started to measure the overall footprint of the manufacturing process

by looking at how much energy is used and pollution given off right from the start.

Following a study at the Norwegian University of Science and Technology, scientists found that the intensive manufacturing of electric vehicles made some cars make almost double the impact on global warming as conventional cars.

Electric cars' carbon emissions: g CO₂e/km



Note: Results include emissions for vehicle manufacturing, direct grid emissions, indirect grid emissions and losses. Based on national averages of 2009.

Sources: DEFRA, GHG protocol, IEA, EPA, GREET, LCA literature.

Electric cars' carbon emissions by country: g CO₂e/km.

Source: shrinkthatfootprint.com

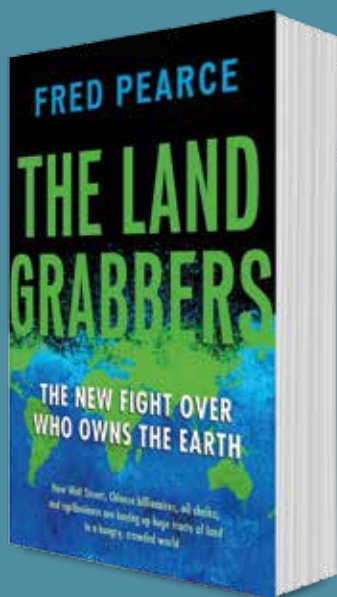
Electricity from coal, which is the most polluting way to generate power, dramatically increases the overall damage done to the environment for an electric car. Because China, for example, generates 77% of its electricity from coal, life cycle analysis of electrical cars in China shows they are far more polluting than conventional cars.

However in a country like Norway, where they rely predominately on hydroelectric power, electric cars immediately start to impose their positive impact on the environment.

Of the 40 countries shown in figure 1, emissions vary from 370g CO₂e/km in coal dependent India, to as low as 70g CO₂e/km in hydro adoring Paraguay. The US average is 202g CO₂e/km, in Britain 189g and in China it's 258g.

On further inspection, we see that in Paraguay most of the emissions are simply from vehicle manufacturing, as they should be, due to their power being incredibly low in carbon. On the other hand, the break down for India is only 70g for vehicle manufacturing, 30g for production of fuel, 200g from power plants and an astonishing 70g simply from inefficient grid loss.

It is obvious to see that the production and use of electric cars can be extremely beneficial to the environment if manufactured in the right way. Countries like Norway and Paraguay are leading the way with their energy mix favouring renewables. In developing countries such as India, it is tougher for them to rely so heavily on renewables due to the sheer demand for energy from such a surging population and economy. But steps are being made in the right direction in India, with large wind farms such as Muppandal generating 1500 MW of electricity a year. Ultimately, it rests on area leaders like Europe and the USA to make the manufacturing of electric cars environmentally viable. With the infrastructure and capital available to make full use of renewable energy sources, these places have the capacity to supply clean electricity to electrical cars and ultimately help in the fight against global warming. ■



THE LANDGRABBERS: The New Fight over who owns the Earth
Fred Pearce

Book review by ANANDITA KETKAR (YEAR 12)

The ownership of the earth is seeping into the hands of a silent minority, often under the 'watchful' eye of not only bureaucracy but also local law.

In *The Landgrabbers*, Fred Pearce delves into what is likely to be the most pertinent ethical and economic issue of our time. Through his adoption of maintaining a stance of investigative journalism, he discovers the purchase of land comprising of a vast potential of economic resources, such as the unexploited Yala Swamp in Kenya, often in far-fetched places by wealthy individuals. As the author describes, 'parcels the size of

Wales are being snapped up across the plains of Africa, the paddy fields of Southeast Asia, the jungles of the Amazon and the prairies of Eastern Europe'. Pearce undoubtedly does justice to not only descriptively revealing such occurrences but to also unravelling their long-term implications for the indigenous locals, the regional economy and the 'landgrabbers' themselves in this revolutionary book.

The book resonates with the economic theory proposed in '*Capital in the Twenty-First Century*' by Thomas Piketty, providing evidence for the widening inequality gap on a global perspective, and perhaps cuts into the heart of the problem itself by highlighting its controversial multiplicities on a global scale. Given its focus on the developed world, Pearce underlines the exploitative nature of land acquisition in the modern-day. He does this by highlighting the absence of enforcement of legislation and the powerlessness of the majority of those affected, whilst mentioning its supposed benefits, primarily to the earners of capital who are purchasing the land at the same time.

The nuances of this book give it a striking perspective of looking at 'landgrabbing' from a socio-environmental viewpoint, which is highly effective in contrasting it to the profit-hungry economic reasons as to why its perpetrators choose to follow the path. Given that this very view can be translated into the flaws of implicit bias, Pearce's descriptive tone is maintained throughout and covers a variety of aspects of each particular 'landgrab', leading to the reader maintaining a balanced view throughout. Given all its imperfections, *The Landgrabbers* is nevertheless an eye-opening read regarding the hidden nature of land ownership in our world. ■

Geography Enrichment

The study of Geography provides a conceptual framework and holistic perspective to help pupils and adults alike explore, understand and address the global challenges of the twenty-first century.

At both Haberdashers' Aske's Boys' and Girls' Schools, the Geography departments are committed to providing a myriad of enrichment opportunities.

- i. **Write for Habs' Geographical Magazine's** Autumn/Winter 2016 issue. Further Information overleaf.
- ii. **Become a member of the Society** and attend Geography club, cross-curricular debates, quizzes and guest speaker talks.
- iii. **Read beyond the syllabus.** Not all background reading has to be from a book. The following magazines are appropriate and all available in the schools' libraries: *Geographical*, *Geography Review*, *The Economist* (also *Intelligent Life* and *Prospect*), *New Scientist*, *National Geographic* and any of the broadsheets.



How many did you get?

Crossword puzzle solutions...

Across: 3. Yangtze; 6. Mississippi; 11. Danube;
12. Amazon; 13. Rhine; 14. Rawthey
Down: 1. Nile; 2. Ganges; 4. Zambezi; 5. Hudson;
6. Murray; 7. Parana; 8. Severn; 9. Congo; 10. Volga

Quiz answers...

Easy

1. Antarctica; 2. Istanbul; 3. Tokyo; 4. Sweden; 5. Pakistan;
6. Abuja; 7. District of Columbia; 8. Xi Jinping; 9. 12

Medium

10. Angel Falls (Venezuela); 11. Ireland; 12. Portugal;
13. Norway; 14. Black Sea; 15. USA; 16. What is the southernmost country in South America? Chile;
17. Damascus, Syria; 18. Bern; 19. South Dakota;
20. Greenland (0.067)

Hard

21. (To the nearest degree) 57 degrees Celsius;
22. Bering Strait; 23. Devon; 24. Niger; 25. Chicago;
26. All of them; 27. 11; 28. 4; 29. 10; 30. Mali

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