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# The 7 most famous serial killers

Hamdah Muhammad

A serial killer is someone who is known to everyone as a friend, lover, or even father, but no one is aware of his or her killer instinct until it is too late. For many years, serial killers have plagued this country and others. They're difficult to track down and almost unnoticeable until they start murdering innocent people. They are said to have a lack of remorse or guilt, emotions, shallow empathy and have impulsive behavior. There are many serial killers, some more known for their unique killings and others not as well known. The seven most serial killers of all time are :



## 1 - Jack the Ripper :

Jack the Ripper, is known to be one of the most famous serial killers of all time. We call him Jack the Ripper because to this day, we have yet to know his true identity. He was responsible for the murder of 5 prostitutes in London during the 1888, the police having found all the victim's bodies' mutilated. This first led them to believe that the murderer was a surgeon, butcher or anyone skilled at using a scalpel. Jack the Ripper mocked the police by sending letters that outlined each murderous act. Despite numerous suspects being named throughout the years, the true killer has never been identified.

## 2 - Jeffrey Dahmer :

Dahmer began killing others in 1978 at the mere age of 18 years old, yet he wasn't arrested for murder until 1991. The reason leading to his arrest was that a soon-to-be victim escaped his clutches and reached the police. After leading the police to Dahmer's house, some gruesome details revolving around his life of killing were soon discovered. The police had found photos of several mutilated bodies with body parts scattered across Dahmer's apartment floor. They even found a vat of acid which Dahmer had used to dispose of all his victims. After thorough investigation, it was concluded that Dahmer had killed around 17 young men of color. His sentence resulted in him serving in prison twice in his life - the first time he was sentenced was due to molestation the second time due to his murdering nature. He lived at the prison until 1994 when he was killed by a fellow inmate.

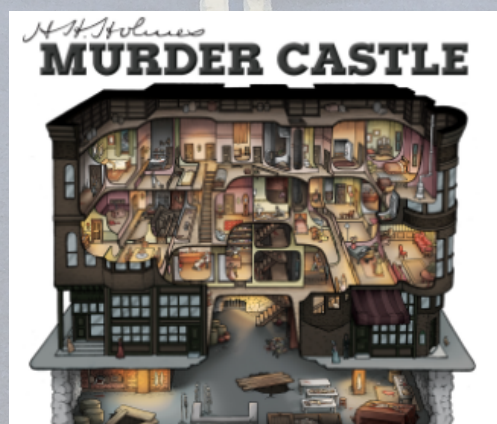
## 3 - Harold Shipman :

Harold Shipman who also lived under the mask of 'Dr Death' was believed to have 218 patients, although it is believed his total killings could have totalled up to around 250 people. Shipman worked as a doctor between 1972 and 1998 at two different hospitals, all while killing patients. No one was suspicious of him until a red flag was raised due to the high number of cremations certificates under his name, also due to the fact that most of these death certificates belonged to elderly women who had died in their hospitals during the day and not during the night.

However, the police did not handle this investigation properly and Shipman became more reckless and he continued to kill victims. Nonetheless, Shipman got too greedy, when he attempted to forge a will that would benefit him the most. The daughter of the man he forged a will for became curious due to the strange will. Finally, he was convicted in 2000 and died in prison in 2004 because he committed suicide.

#### 4 - H.H. Holmes :

H.H. Holmes, the pharmacist who turned a hotel into a torture castle, is arguably the most enigmatic of Chicago's serial killers. Prior to the 1893 World's Fair, Holmes relocated to Chicago and began constructing a three-story hotel with a variety of sinister devices, including gas lines, secret passages and trapdoors, dead ends, basement chutes, soundproofed padding, and torture devices sprinkled around a maze. The gas allowed Holmes to knock out his guests, frequently on his surgical tables, before the worst of what was to come. He then sold skeletons to medical schools and performed life insurance scams by burning the remains in the building's furnace. He managed to successfully kill 30 innocent victims until a fellow scammer turned him in due to Holmes falling short on a financial agreement. After being turned in, Holmes was hung in 1896.



## 5 - Pedro Lopez :

It's possible that one of the world's most prolific serial killers is still at large. Pedro Lopez is suspected of being involved in over 300 murders in Colombia, Ecuador, and Peru. Tribal women were responsible for at least one-third of the homicides. Police discovered the graves of more than 50 of Lopez's teenage victims after his arrest in 1980. He was later found guilty of the killings of 110 Ecuadorian females and confessed to a total of 240 murders in Colombia and Peru. The "Monster of the Andes" was freed in 1998 after serving only 20 years in prison for good behavior. His whereabouts have remained a mystery for more than two decades.

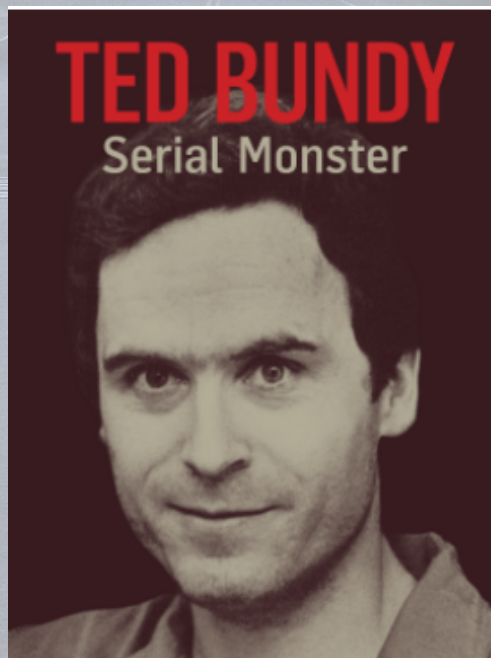
## 6 - John Wayne Gacy :

John Wayne Gacy was an affable construction worker who was interested in politics and even acted as a clown for birthday celebrations, according to his suburban neighbors. He wasn't a clown at all. Gacy was first linked to the case in 1978, when a 15-year-old boy who was last seen with him vanished. Families of missing boys had pointed fingers at Gacy before, but this was the first time officials took them seriously. A search warrant was issued shortly after, and police entered the Gacy residence, where they discovered roughly 30 victims buried in a four-foot crawl space beneath his home. He was found guilty of 33 charges of murder, as well as rape and torture, and was put to death by lethal injection in 1994.

## 7 - Ted Bundy :

Said to be one of the most cynical serial killers of all time. Ted Bundy relished the attention his murders drew, and many in the United States were more than happy to oblige him. His hunting zone was the western United States, where an unknown number of murders—mostly of college-aged women—were reported from Washington and Oregon all the way to Utah and Colorado. Bundy was captured and convicted of abduction in Colorado, but he eluded capture and fled to Florida, where he killed several times more. The alleged murderer served as his own lawyer during what is thought to be the first televised murder trial, sought interviews, and boasted of the following he had acquired, and Bundy's eventual arrest and its aftermath attracted the attention of the nation. After finally being caught for his responsibility for hundreds of innocent victim's deaths, he was finally put to death in an electric chair in 1989.

This was just a few of many cynical serial killers, the purpose behind their murders - unknown.



# Do standardised tests really reveal a students' knowledge?

Melody Zhou

Do standardized tests accurately measure the extent of students' ability to perform in the core subjects? Should one test, the SAT or A-Level, be the determining factor in what a student is capable of and how successful they will become? Not many people look forward to taking tests. But when we look on our doctor's wall and see a plaque indicating that she is "board-certified," we might think the certification is a good thing, the doctor passed a test. We may not like taking tests, but we are grateful that experienced people assist us with it. Nobody desires a doctor or a lawyer whose ability is below the accepted standard. I believe that standardized tests do not accurately demonstrate a student's knowledge and aren't worth the stress and pressure.

Some say standardized tests present an objective measurement of education and sufficient data to gauge areas for improvement. Teachers' grading practices are naturally uneven and subjective. An A in one class may be a C in another. Teachers may also have conscious and unconscious biases. Standardized tests offer students across the country a unified measure of their ability. Aaron Churchill, Ohio Research Director for the Thomas B. Fordham Institute, stated: "At their core, standardized exams are designed to be objective measures.



They assess students based on a similar set of questions, are given under nearly identical testing conditions and are graded by a machine or blind reviewer. They are intended to provide an accurate, unfiltered measure of what a student knows.”

Continually, states or local jurisdictions employ psychometricians to ensure tests are fair across populations of students. Mark Moulon, PhD, Chief Executive Officer at Pythias Consulting and psychometrician, offered an example: “If you find that your question on skateboarding is one that boys find to be an easy question, but girls find to be a hard question, that’ll pop up as a statistic. Differential item functioning will flag that question as problematic.” With problematic questions removed, or adapted for different groups of students, standardized tests offer the best objective measure of what students have learned.

However, we may argue that standardized tests only determine which students are good at taking tests, offer no meaningful measure of progress, and have not improved student performance. Standardized test scores are easily influenced by outside factors: stress, hunger, tiredness, and prior teacher or parent comments about the difficulty of the test, among other factors. In short, the tests only show which students are best at preparing for and taking the tests, not what knowledge students might exhibit if their stomachs weren’t empty. External stereotypes also play a part in scores: “research indicates that being targeted by well-known stereotypes (‘blacks are unintelligent,’ ‘Latinos perform poorly on tests,’ ‘girls can’t do math’ and so on) can be threatening to students in profound ways, a predicament they call ‘stereotype threat.’”

Students are tested on grade-appropriate material, but they are not re-tested to decide if they have learned information they tested poorly on the year before. Brandon Busted, Executive Director, Education & Workforce Development asks, "What if our overreliance on standardized testing has inhibited our ability to help students succeed and achieve in a multitude of other dimensions? For example, how effective are schools at identifying and educating students with high entrepreneurial talent? Or at training students to apply creative thinking to solve messy and complex issues with no easy answers?" Additionally, standardized tests can make or break a student. Today, children are being failed, denied access to an advanced program or school, or even refused a high school diploma based on a single standardized test. Moreover, these tests can determine whether students will spend their summer vacation for guaranteed graduation or enter the program or school of their choice. A few marks may be the turning point of whether students will be unwinding on the beach or sweating out summer school. Since standardized tests have a great deal of power, students are forced to prepare for them rather than learn valuable knowledge. Standardized tests are not a high-quality predictor of college success. Rewarding students who are good test takers and penalizing those who think more creatively is dehumanizing, it teaches children that their test-taking abilities will make or break their future.

In conclusion, Standardized testing creates unnecessary amounts of stress in students.

For children to succeed, students must be individuals with unique strengths and weaknesses, rather than mindless robots racking up points on a test that supposedly determines how well they will do in the future. The students of today will soon be leading the world. If we all want the future to be bright, we must comprehend multiple life skills and crucial knowledge that we will use in life rather than wasting our time preparing for tests that will not benefit us. Globally, the culture must change so that standardized test scores no longer define the way we see student intelligence or potential.

# Mistakes

Wiktorija Blazik

We've all had those cringey, embarrassing moments that we remember for what seems like the rest of our lives. Tripping over something in front of your friends, spilling food on someone, or stuttering and stumbling over your words. Chances are, you can name hundreds of moments like these, and everytime you recall them, a wave of shame and embarrassment washes over you. But we rarely seem to remember our successes as much. And, honestly, are the mistakes we make actually that bad?

From an evolutionary perspective, humans are hard-wired to remember the mistakes we make. It's how we, as a species, have managed to survive for so long - we survived by learning from our experiences and the experiences of others. Pretend you're a caveman (or woman!). Writing hasn't been invented yet, so there's no way (other than word of mouth) of knowing what is dangerous and what isn't. One day, while searching for food, you happen upon some red mushrooms that you decide to eat. For the next few weeks, your stomach is repeatedly turned inside-out and you - very quickly - start to regret your snack. If you were a cave-person, this mistake would probably become somewhat of a core memory for you - you'd know forevermore that red mushrooms = being sick (and not in the cool way). For centuries, the mistakes that were so deeply ingrained in our memories became handy survival guides to ensure that we'd prosper. To ensure that we wouldn't repeat our dangerous mistakes, we needed to remember them!

Fast-forward to the 21st century: now, there's no shortage of advice, both on the Internet and from well-meaning (but annoying) parents. We no longer have as much use for remembering mistakes so vividly, and yet we do. It's the curse of evolution. What is even worse is the way that mistakes can be so quickly disseminated online - you never know if a video of you falling down some stairs might go viral.

Moreover, our societal attitude towards mistakes is exceedingly negative. Mistakes that shouldn't be that serious like misspelled words, incorrect answers on tests, or stumbling over words during a presentation - are blown out of proportion. However, instead of carefully considering what we did wrong and learning from our mistakes, we consider them a source of shame and embarrassment.

In some cultures, mistakes are viewed in a more positive light. In a study that compared American and Taiwanese year 2 students who were given an impossible maths problem to solve, the American children worked for (on average) 30 seconds before giving up, saying that they hadn't learnt the techniques before. However, the Taiwanese students worked for much longer - some working on the problem for over an hour before being told it was unsolvable. If the authors had given the students a solvable problem, there is no doubt that the Taiwanese children would have been much more likely to find a solution by persevering and learning from their mistakes.

As well as this, research shows that people who carefully consider their mistakes are more likely to be intelligent.

This is not because intelligence causes someone to learn from their mistakes, but because learning from mistakes is what makes people intelligent; the authors of the study stress that intelligence is flexible.

There's a final study that is very applicable to this topic. A pottery class was split into two groups, each with a different goal. The first group aimed to make one perfect pot by the end of the month, a magnum opus of sorts. The second group were told to make one pot a day over the course of a month, totalling 30 pots, with the final pot being the one that would be judged. At the end of the month, the pots of both groups were judged, and the researchers came to a unanimous conclusion - the final pots made by the second group were significantly better in every aspect than the first group's pots. Why? Because making mistakes is how people learn!

So, what does this mean for people like me and you? Well first of all, it shows that mistakes aren't as bad as you might have thought. It's important to make mistakes and keep trying, because that is how you'll learn to be even better at the things you do. And the next time you remember a mistake you made in the past, remember that the reason it seems so embarrassing to you in hindsight is because you now understand how to easily solve the problem - as a person, you've grown.

# Through the Cosmos

Namisha Batheja

In the beginning, the Big Bang was quite literally as the name goes, it was the moment 13.8 billion years ago when the universe began as an infinitely dense, tiny ball of matter, which all just exploded, giving rise to the molecules, galaxies, stars, and atoms that we see in front of us today. Most astronomers utilize the Big Bang theory to exemplify how the universe began. Likewise, astronomers have notions for the end of the universe. This includes how the universe could potentially collapse in a Big Crunch which is where the expanding universe could conceivably not combat the communal inward pull of gravity, and it would relapse like the big bang in reverse; yet, as time has moved on, many now acquiesce that the universe is to end with the " Big Freeze."

The cosmos is the complete universe deemed a unified whole in the astronomical sense. The word originates from the Greek lexical item, "kosmos," translating to "order," "harmony." The universe consists of three types of substance, including dark matter, dark energy, and normal matter. Normal matter embodies the stars, planets, human beings, essentially every visible object in the universe. Dark matter is an elusive substance. It is said to make up between 80-90% of the universe; the name correlates to how dark matter does not emit any form of electromagnetic radiation.

It is the skeleton for the cosmic web as declared by cosmologists; this is the universe's large-scale structure that detects the motion of galaxies, asteroids, meteors, and other due to its gravitational influence on planets' cosmical objects.

The word cosmos organizes multiple astronomical phenomena, including our galaxy and the Milky Way, yet there's an origin story. For early Egyptians, the divine Nile flowed through the land of the dead ruled by Osiris. During the summer season in the Northern Hemisphere, an obscure band of light stretches from horizon to horizon; this is the faint, white shade that lacerates the deep black background visible when looking up at the night sky. While this was the Egyptian belief, the ancient Greeks considered it a milk river. As technical refinements have emerged, astronomers believe the band of soft light to be countless stars in a flattened disk seen edge-on. They are so compressed that their individuality is nonexistent; these vast collections of stars, so compact together, are considered galaxies, after the Greek word "milk." Our galaxy, where the sun belongs, is known as the milky way galaxy.

The Big Bang is also anointed cosmological expansion; the universe is perceived as a monumental, panoramic, and new feature, not present on small emerges- it is the cosmological expansion. In terms of the cosmos, the galaxies appear to be racing away from one another, with the velocity of recession being directly proportional to the object's distance- Hubble's law.



Edwin Hubble's law is the leading theory of the Big Bang, supported by elements such as cosmic microwave radiation, the remnant of the fierce light of the first fireball explosion! The Big Bang and how cosmology came to be are scientifically beneficial theories. However, others are slightly eccentric! Another approach is one of "Sterile neutrinos," which are, simply put, dark matter that may be made of the most elusive particles ever imagined; hypothetically, they interact with other substances and weight through the force of gravity, this makes them impossible to uncover and detect. Although they possess properties to be considered the dark matter, buzzing at speeds of a few Km/s, which forms mid-sized clumps mapped by recent studies and observations, these help form stars and black holes, which give the energy to send neutron stars speeding around our galaxy.

Next up is the fact that nothing is real. Nick Boston claimed that we're living inside a computer simulation, indicating our universe isn't even real; this resonates with the idea of other planets being stimulations as well; in that case, all those cosmological oddities, including matter and dark energy, are patches, which are stuck to cover up inconsistencies in the stimulus. This idea doesn't stand very well with research as there is essentially no proof apart from this theory that Nick Boston stated.

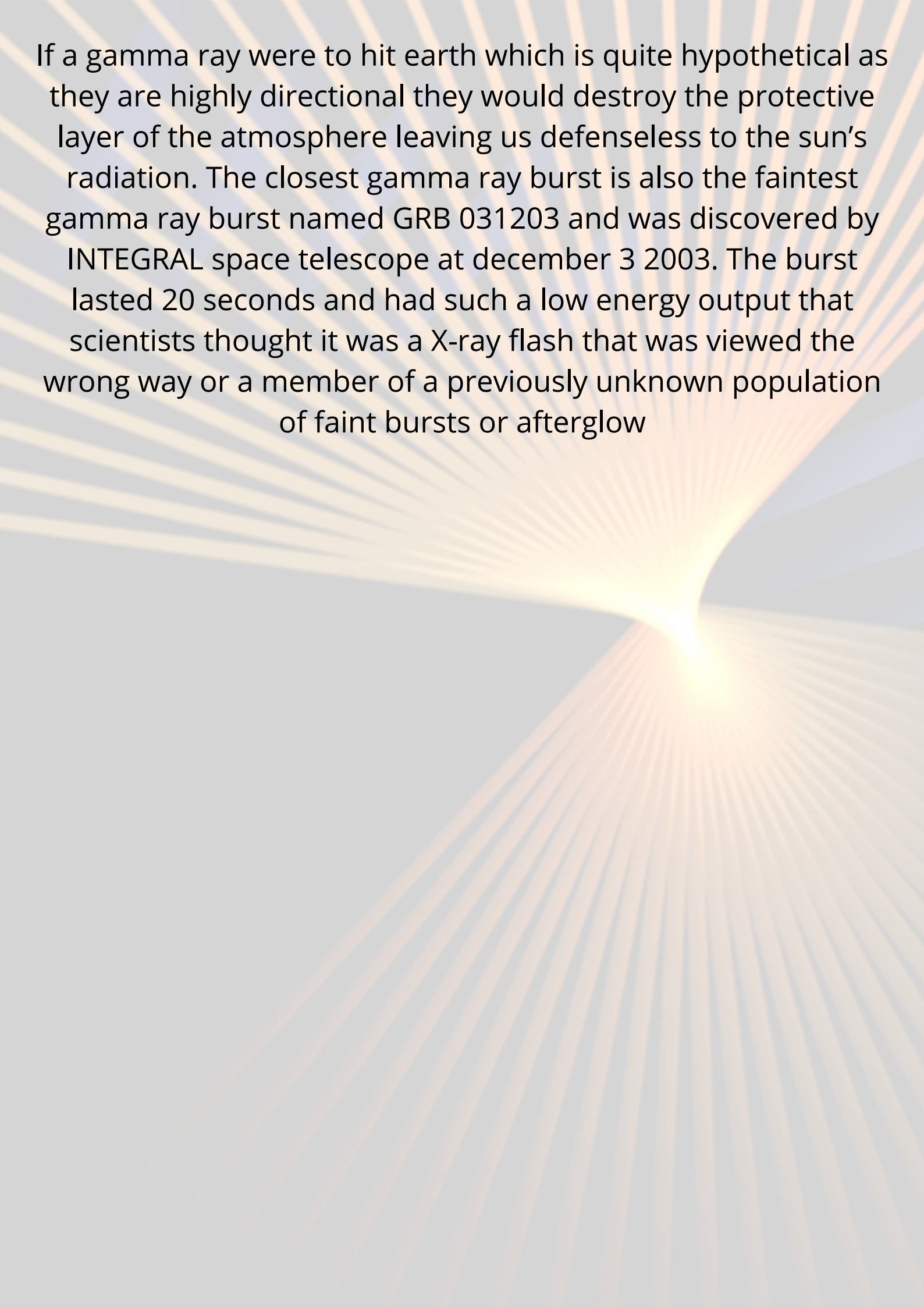
As we adhere to more technological advancements, we get closer to finding evidence for prior theories and using that proof to create newer ones. The limits of what we are to discover are infinitely boundless; what's next?

# Gamma rays

Laura BLazik

Gamma rays are waves with the smallest wavelength in the electromagnetic spectrum. Normally gamma ray bursts, also called GRBs, have initial gamma rays followed by fading gamma rays named afterglow. GRBs can be made by pulsars, neutron stars, supernovae and the area around black holes. Gamma rays are the most energetic. In the late 1960s GRBs were observed by the US Vela nuclear test detection satellites, which were used to check, if the USSR was testing nuclear bombs. To detect gamma rays properly you have to use a specially designed telescope like the Fermi gamma-ray space telescope. One gamma ray burst found by a satellite is one of the most distant objects ever recorded. The GRB was detected by NASA's swift satellite caused by a black hole being created in a supernovae explosion 12.8 billion light years away. Gamma-ray detectors normally contain densely packed crystal blocks. Gamma ray wavelengths are so short that they can just pass by the atoms of a gamma ray detector but as the gamma ray passes through and they hit the electrons of the crystals and scatter in a way called compton scattering is where a gamma ray hits an electron and losses energy. At the end of the year 1978 the interplanetary network system (IPN) for detecting gamma rays was finished. Rudolf Mössbauer got a Nobel prize for physics 1961, specifically his research on gamma rays which helped make the IPN. In january 2019 a gamma ray burst named GRB 1190114C was initially detected which so far has made the highest energy gamma ray bursts. .

If a gamma ray were to hit earth which is quite hypothetical as they are highly directional they would destroy the protective layer of the atmosphere leaving us defenseless to the sun's radiation. The closest gamma ray burst is also the faintest gamma ray burst named GRB 031203 and was discovered by INTEGRAL space telescope at december 3 2003. The burst lasted 20 seconds and had such a low energy output that scientists thought it was a X-ray flash that was viewed the wrong way or a member of a previously unknown population of faint bursts or afterglow



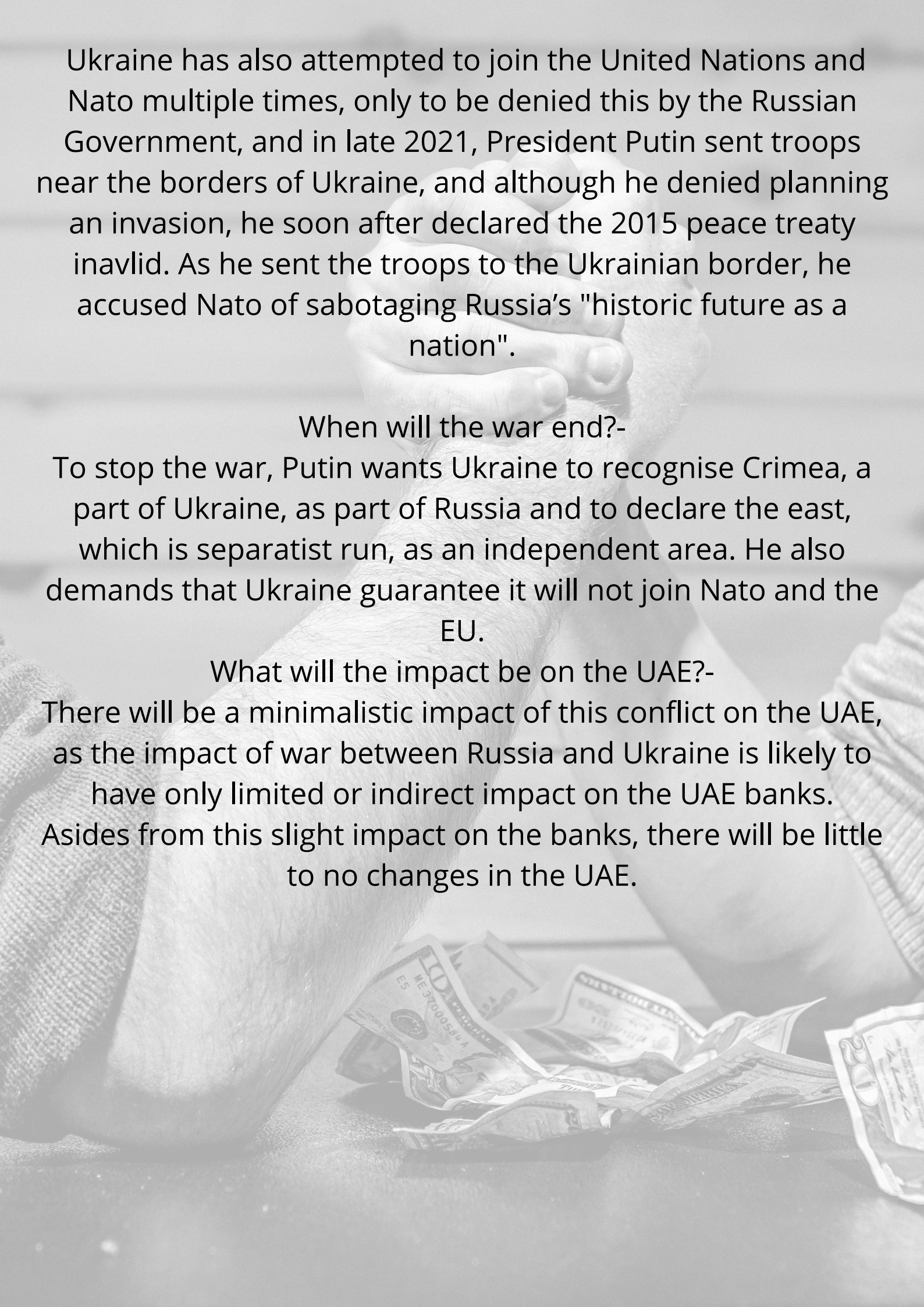
# Russia Ukraine conflict - What is it and how did it begin?

Muhammad Shuja Saddat

The war between Russia and Ukraine is one of the major conflicts of the past few decades, as Russia has declared war on Ukraine and has already begun to invade, with the US on the sideline threatening to enter the war if Russia does not back out. So, what is this war all about, and how did it start?

It is already clear that Vladimir Putin, the Russian President, has decided to take control and overthrow Ukraine and its democratic government, as he has claimed that his goal was to protect people from violence and genocide and attempt to demilitarize Ukraine, saying that he aims to “demilitarise and de-Nazify” Ukraine. However, there has been no violence or genocide in Ukraine, and so many of his statements have been disproved as false or foolish.

This war has been in the making since 2014, when the former president of Ukraine, Viktor Yanukovich, was removed from his position. He was an open supporter of Russia, and after he was removed from his position of power President Putin has frequently stated how he believes that Ukraine has been taken over by extremists and terrorists.



Ukraine has also attempted to join the United Nations and Nato multiple times, only to be denied this by the Russian Government, and in late 2021, President Putin sent troops near the borders of Ukraine, and although he denied planning an invasion, he soon after declared the 2015 peace treaty inavlid. As he sent the troops to the Ukrainian border, he accused Nato of sabotaging Russia's "historic future as a nation".

When will the war end?-

To stop the war, Putin wants Ukraine to recognise Crimea, a part of Ukraine, as part of Russia and to declare the east, which is separatist run, as an independent area. He also demands that Ukraine guarantee it will not join Nato and the EU.

What will the impact be on the UAE?-

There will be a minimalistic impact of this conflict on the UAE, as the impact of war between Russia and Ukraine is likely to have only limited or indirect impact on the UAE banks. Asides from this slight impact on the banks, there will be little to no changes in the UAE.

# Stephen Hawking- Biography and discoveries

Rosa Di Sante

## Early years...

If we have ever gotten as far as we thought we would have it is only because we were able to ask ourselves the “big questions” and didn’t sway when the explanations were even more inconceivable than the questions themselves. “It is by standing on the shoulders of Giants” that we are able to see as far as we ought to, as physicist Robert Hooke had once said.

On the 14th of march, not so very long ago from the time I am writing this, it was Pi day, and on this day, quite coincidentally, is also when Stephen Hawking had died, the year being 2018.

But let us rewind the clock some bit. Let us slightly infringe Einstein’s theory of relativity and travel back to the time when Stephen Hawking was born on the 8th January, 1942, during the Second World War in Oxford. Stephen was born to medical researcher, Frank Hawking and political activist, Isobel Hawking.



In 1950 the Hawking Family moved to St Albans when Frank Hawking was promoted to head of the division of parasitology in the National Institute for Medical Research. There, the family was viewed as particularly intellectual just as much as peculiar. You would find meals were often spent with each person silently and diligently buried in a book. So, it is safe to say that the family placed a high importance on education and that it would not be regarded as surprising when Frank Hawking had wanted his son to attend the well regarded Westminster School, but the 13 year old fell ill on the day of the entrance examination (to apply for a scholarship) and seeing that the family could not support his school fees without the financial aid of a scholarship, he remained in what was his then current school, St Albans School.

This was not all bad news for Stephen though because he got to remain with his close group of friends with whom he loved talking about interesting things with, as well as making fireworks, model aeroplanes and boats. From 1958, with the help of his mathematics teacher, they built a computer from clock parts, an old telephone switchboard and other recycled components.

This is where the bulk of the story starts to increase in diameter, steadily, but it is increasing...



## Studies...

Hawking later began his university studies at University College, Oxford, in October 1959 at the age of 17 for an undergraduate degree in physics. The final examinations were delivered wearily (by dint of his self estimated 1000 hours of study during his 3 years in Oxford-basically, very little).

But then again, there still is the saying "study smart, not hard"...

He did end up only deciding to answer theoretical physics questions rather than those requiring factual knowledge in his final exams.

But the final results proved to be lingering on the borderline between first and second-class honours. Hawking needed a first class honours degree to be able to go to the University Cambridge for his graduate study in cosmology as planned.

Hawking was concerned that he was viewed as a lazy and difficult student. So, when asked to describe his plans, he answered, "If you award me a First, I will go to Cambridge. If I receive a Second, I shall stay in Oxford, so I expect you will give me a First."

And so, he went to Cambridge.

Not only was he doubtful of the adequacy of his mathematics training for general relativity and cosmology but he was also disappointed when instead of getting assigned the very well known and esteemed astronomer, Fred Hoyle, he got assigned

Dennis William Sciama, one of the founders of modern cosmology. However, it was when he had gotten diagnosed with motor neurone disease that he fell into a great depression and felt that there was little point in finishing his studies despite his doctors encouraging him to continue.



Thankfully, his disease progressed more slowly than expected by professionals and the earliest prediction that he only had 2 years left to live was unproven.



He still did manage to publicly challenge the works of Fred Hoyle and his student Jayant Narlikar and in doing so earned a name for brilliance and boldness. But that is apart from writing his thesis which was very much influenced and inspired by Roger Penrose and his theorem of spacetime singularity within the centre of black holes. Stephen Hawking applied the same logic to the whole universe and wrote his thesis on this topic during 1965.

### Discoveries...

But wait, what is a singularity?

Singularities are basically the points where mathematics breaks down and this is done when the singularities generate insanely large values. An answer also lies in the book *Brief Answers To The Big Questions*, where Stephen Hawking says that thanks to the investigations from Robert Oppenheimer and his copartners, we know that "if one neglected pressure, a uniform spherically systematic symmetric star would contract to a single point of infinite density .

Such a point is called a singularity." He explains that "all our theories of space are formulated on the assumption that space-time is smooth and nearly flat, so they break down at the singularity, where the curvature of space-time is infinite."

(Curvature is related to gravity and therefore curvature singularities correspond to an "infinitely strong gravity.").

However, it was unclear whether these singularities actually existed as, yes, most of these singularities can be resolved by identifying that the equations are missing some other factor or variable...or noting the actual physical improbability, or impossibility of something ever reaching a singularity point....that is, they are most likely "not real". Or at least that is what scientists thought when talking about the gravitational singularities...they thought they could not be possible because that would mean the breaking down of Einstein's theory of general relativity...but in reality, his whole Big Bang theory was a singularity!

This was in fact, one of the many discoveries that Stephen Hawking made. The type of singularity in his and Penrose's discussions is a gravitational singularity and it is about to be proven also existent in one of the darkest places in space... black holes. But that we shall leave for the enjoyment of the next issue. But don't get scared, don't worry, I am just as taken aback as you are; it's a progressive journey. Hopefully more will continue to fall in love with this science, physics is all around us- literally. So I shall conclude this first part with one of Stephen Hawking's quotes; "Science is not only a disciple of reason but also one of romance and passion." So, love on...

# Is terraforming Mars really possible?

Alisa Pereira

'Yeah, it's doable.'

The terraformation of Mars is one ideology scientists still seem to not wrap their head around. With Mars being a planet on its own, our current advances may only be baby steps towards inhabiting Mars. While the population rises, another planet may be the only ethical way out, still, our world is plagued with human industriousness, cattle farming, mining and other treasons.

To terraform a planet with a radius of 2,106 miles, immense actions are to be taken. Our world may not be our blue orb centuries down the line, and to terraform Mars may take unlimited efforts and an unseen amount of time.

Jim Green, a retiring NASA scientist said to 'Stop the stripping, and the pressure is going to increase.' The stripping of Mars is due to the lack of its own magnetic field. Solar wind is able to knock off ions. And when this was measured by NASA's MAVEN spacecraft, it showed an increased number of ion loss when greater solar wind was present. What this led scientists to believe is that Mars truly was a warm planet in its 'past' life, now it's up to us to get it back.

When pressure increases, temperature follows, by increasing the temperature of Mars, we begin to house life. Easier said than done. According to Kevin Bonsor, the 3 methods in increasing the climate of Mars include...

- “Large orbital mirrors that will reflect sunlight and heat the Mars surface.
- Greenhouse gas-producing factories to trap solar radiation.
- Smashing ammonia-heavy asteroids into the planet to raise the greenhouse gas level.”

While these methods may seem ‘out of this world’ they are possible. Currently, NASA is working on a ‘solar sail propulsion system’ where mirrors use solar radiation to power spacecraft. Kevin Bonsor suggests using these mirrors, “a couple hundred thousand miles from Mars and use the mirrors to reflect the sun's radiation and heat the Martian surface”. The solar radiation can be targeted to Mars and increase the temperature also resulting in an increase of greenhouse gases, e.g. Methane.

The problems we attempt to rid our world of prove valuable to Mars. Adjusting the temperature and pressure of Mars requires time, in our generation, Mars will never be terraformed. But we can only hope that for our generations ahead, it's about to get lit.

# The future of Chelsea FC

Rishabh Gandhi

Roman Abramovich has had all of his assets frozen by the UK Government so what does this mean about Chelsea FC?

Who is Roman Abramovich?

- Roman Abramovich is a Russian billionaire who bought Chelsea FC in 2003, he is closely linked to Vladimir Putin. Abramovich is the Confidant of Russian leader Vladimir Putin.

What sanctions have been posed to Chelsea FC?

- All Chelsea teams are now banned from:
  - Offering new contracts to players or staff
  - Conducting any official transfer business
  - Selling new tickets to any game for any of their teams - Season ticket holders and Tickets that have been already bought can still watch matches.
  - Selling any merchandise to fans, all Chelsea FC shops have been closed.
  - No stadium work or redevelopment
  - Must spend over £500,000 on security around Stamford Bridge (Chelsea's Stadium)
  - Stewarding and Catering cost for home and away games have to be minimum £20,000 per match
- Why have these sanctions been placed?
- The sanctions are to stop Chelsea owner Abramovich to stop making any money whilst being in the UK
- Along with this Abramovich has also been detained and deported with his UK visa being immediately cancelled
- Why are Chelsea FC still allowed to run?

- The Government has granted Chelsea FC a special licence to allow fixtures to be completed, staff to be paid and season ticket holders to attend matches.
- The Government has stated that Chelsea FC is part of the UK culture and heritage and hence has been given this special licence.

Is there any way out of this?

- As per Sky Sports, Chelsea FC can still be sold if owner Abramovich is allowing the government to take over the sales process.
- The club have been given a special licence to continue with football related activities but the sale effectively bars the sale of the club following Roman Abramovich's sanctioning.
- In a statement released by gov.uk, it states: *"Given the significant impact that today's sanctions would have on Chelsea football club and the potential knock on effects of this, the Government has this morning published a licence which authorises a number of football-related activities to continue at Chelsea.*
- *"This includes permissions for the club to continue playing matches and other football related activity which will in turn protect the Premier League, the wider football pyramid, loyal fans and other clubs. This licence will only allow certain explicitly named actions to ensure the designated individual is not able to circumvent UK sanctions. The licence will be kept under constant review and we will work closely with the football authorities."*

It remains to be seen as to what the future holds but with '20 credible parties' interested in the Club, it is unclear as to who will still hold interest after the sanctioning.

# Editor's Note!

Hi JC! Happy end of term! We at the JC Juice team hope you've enjoyed reading this month's edition and have had a wonderful 2 terms of the year. I know we at the JC juice are looking forward to the wonderful articles that are to come in 2022 and our writers and editors worked extremely hard to research and discuss relevant and interesting topics for you to enjoy!

If you have any suggestions or topics you would like to see in next month's article - or you would like to write an article yourself - please send us an email at [jcjuice@jumeirahcollege.com](mailto:jcjuice@jumeirahcollege.com) and we will be in touch with you.

- Maria Davvi and Imogen O'Connor, Editor-in-Chief and Lead Editor

## Thank you...

- To Mr Simpson, for all the support and advice!
- To this month's writers : Aditi Karode, Arav Prasad, Emma Thomas, Hamdah Muhammad, Namisha Batheja, Rishabh Gandhi, Sabrina Niazi, Wiktorja Blazik
- To our editors Ananya Mehta, Aarush Jaiswal, Aditi Karode, Namisha Batheja, Reyna Mehta, Joshua Stapley and Emma Thomas for their hard work getting this edition out!

**... and lastly and most importantly to our readers, because without you, there would be no magazine.**