

THE COLUMNS



by pupils; for pupils HSD's Newsletter: Issue 117

The last few weeks of school before the summer are half the time extremely uneventful, the other half time completely hectic. For those such as myself going into form six, adjusting to a new, free period filled timetable, can be trying as you attempt to figure out 'what the heck am I meant to do for half the day?' Others are out of school on trips abroad or taking part in their bronze, silver and gold Duke of Edinburgh award expeditions.

This week saw sports day take place and we have plenty of photos showing the day, as well as prize giving. Farewell to all the departing sixth years, and to Meagan, Megan and Roena, who have been splendidly editing this for the last year. We hope to do their efforts justice. Happy holidays everyone.

Co Editor, Charlie Grewar

Sunrise On The Reaping

Rosie O'Ready

Before you read this article, beware! This review doesn't contain any big spoilers, but I'd recommend you know at least a little about the original series, just so you can enjoy this book with your whole heart!

On June 6th of last year, Suzanne Collins excited everybody by announcing that a new book, Sunrise on the Reaping, was to be released. Fast forward 9 months, and it's out!

As well as the new book, there will also be a film version released in November 2026. This novel is the fifth in the Hunger Games series, alongside The Ballad of Songbirds and Snakes, The Hunger Games, Catching Fire, and Mockinjay. Each one has been warmly welcomed, and although the first book was released almost 17 years ago it is still enjoyed by millions. But what about the new book? Is it any good? Well that's what I want to tell you.

We already know the main character, Haymitch Abernathy, as Katniss and Peeta's mentor in the original trilogy, but in this book we see his games, and how he survived. As mentioned in The Hunger Games, Haymitch's games were on the 50th Quarter Quell, meaning there was double the number of tributes and double the chance of death. Haymitch is reaped amongst the three others and travels to the Capitol, to prepare for the games. After that, I'll leave it to the book itself.

Throughout the book we meet characters old and new. As in the other four books, Collins fleshes out the characters thoroughly, compelling us to despair at their losses and cheer at their wins. Each character is unique and layered, no matter how insignificant their role may seem, which shows just how good of a writer Collins is. Sunrise On The Reaping has a magnificent plot, which is certain to leave you hooked. From the original trilogy, we know little of Haymitch's story, but this book completes it, and satisfyingly ties in with everything known so far.

When I read this book for the first time a few weeks ago, I instantly knew it was a favourite and a certain re-read, and I hope if you read it, you'll find the same.

Marvel's Thunderbolts*

Your main character jumping off the world's second tallest building while monologuing about their depression may not sound like the ordinary way to start a Marvel movie. Then again, *Thunderbolts** is not exactly an ordinary Marvel movie. Spoilers follow.

The film is a welcome change of pace from recent MCU entries such as *Brave New World* and *The Marvels*. It's one of the most emotional Marvel films in recent years, and honestly one of my personal favourites. The humour is balanced well with the serious parts and the mental health exploration is treated with due solemnity.

The aforementioned protagonist is Yelena Boleva played by Florence Pugh. The kind of but not really sister of Black Widow, who has been working as black ops for Julia Louis Dreyfus's Valentina de Fontaine. Also in Val's employ is failed Captain America John Walker, played by Wyatt Russell, former Ant-Man adversary Ghost, played by Hanna-John Kamen, and Taskmaster, played (briefly) by Olga Kurylenko.

Facing investigation by the government for her actions, Val decides to dispose of her operatives by sending them all to kill each other in a giant furnace in the middle of the desert. Shortly after Ghost shoots Taskmaster in the head, the team find Bob, played by Lewis Pullman. The surviving members decide to team up and get the heck out of there and are spared the long walk back to New York by Yelena's kind of but not really dad, former Russian super soldier Red Guardian, played by David Harbour, who works as a freelance limo driver, to Yelena's embarrassment.

As Red Guardian drives them back to NY to stop Val they are intercepted by Sebastian Stans MCU veteran and briefly congressman, Bucky Barnes, who needs them to testify against Val, who has set up camp in the old Avengers tower rebranded the watchtower. They persuade him to confront her personally and drive a van through the front door of the tower, despite Val leaving it unlocked.

You see Bob is the result of Val's experiments in creating the Sentry, a new hero to give her dominance and make her unimpeachable. Bob was never the intended hero, just a successful Guinea pig. After wiping the floor with the Thunderbolts, Bob starts to question Val's orders she activates the Sentry's kill switch, triggering his feelings of emptiness. Uniquely the villain of the piece is not some one-dimensional world-ending threat, but instead Bob's depression taking the form of the Void, the little voice at the back of your head wearing away at you, mocking you, telling you you're nothing. A main theme of the film is depression.

It's not an in-depth look at the human condition, this is Marvel not Scorsese, but this is one of the most character-driven MCU movies there is. Bob's transformation into the Void at the film's climax, with a truly terrifying visual of New York becoming consumed by darkness as people are flattened into shadows on the pavement, traps the team inside their worst memories. Yelena is forced to relive her childhood raised by the Red Room and eventually finds Bob hiding in the attic above his parents fighting. They are joined by the others who fight their way through Bob's worst memories, punching abusive parents and him on meth in a chicken costume waving a sandwich shop sign (no seriously, this actually happens). Eventually they reach the lab where Bob was experimented on and confront the Void. With the others thrown back, Bob unleashes his anger on the shadowy figure, punching repeatedly while he laughs back at him. The Thunderbolts then struggle forwards him and save him from giving in to his darkness with a group hug. The Void vanishes and they find themselves back on the street. The film concludes with Valentina hastily announcing that the team are her 'new

Avengers' right before they can kill her. The end credits is a hilarious montage made up of various in-universe responses to this announcement from 'not my Avengers' to 'I don't mind it.' The mid-credits scene is Red Guardian in a supermarket trying and failing to get customers to buy the new Avenger's cereal box. The post-credits scene shows the team fourteen months after the film's events being hit by the news that Captain America, Sam

Wilson is forming his own Avengers and suing them for using the name. Oh, and finding the Fantastic Four rocket entering the atmosphere. So, it looks like there'll be two Avengers teams in next year's *Avengers: Doomsday*. Personally, I'm rooting for team Thunderbolts. They're likeable and relatable characters with an enjoyable dynamic.

Also, I do kinda want to see them riding Bob into battle as Red Guardian suggests

How the seasons mess with our minds

Ayanah Adam

The sun is (currently) shining, it's warm and I'm feeling great. Let's face it: the weather isn't just small talk. It's a full-on personality test. Some people wake up on the first cold, grey morning of October and think, "Ah yes, my time has come." Meanwhile, others are googling cheap flights to Spain and wondering if they can legally hibernate until April. Seasonal preference is a personal thing. A 2021 YouGov survey found that only 7% of Brits called themselves "winter people". Whilst, a sunnier 33% chose summer as their top season.

However, our preferences aren't random. There's an interesting mix of psychology, biology, and even pop culture at work, of why we feel the way we do during specific times in the year.

Summer gets a lot of hype. And for good reason—long days, warm nights, and the general idea that life is supposed to be better when the sun's out. Exposure to sunlight boosts your body's production of serotonin, the "feel-good" chemical linked to mood and energy. So yes, science is saying "sun = happy." But here's the twist: summer isn't an exciting time for everyone. For some, the pressure to be constantly outside, endlessly social, and always having "the best summer ever" can get overwhelming. There's even something called summer-onset SAD (Seasonal Affective Disorder), where the extra daylight and heat trigger symptoms of anxiety or depression.

Autumn is the season of transitions. The leaves go orange, the air gets crisp and everyone's wardrobe suddenly becomes like 97% knitwear. There's a cosy, reflective energy to autumn that many people love—it's the season of lighting candles, slowing down, and pretending you're in a cottagecore TikTok. But it's not all golden leaves and Gilmore Girls reruns. As daylight starts disappearing, some people begin to feel more sluggish or low in energy. For those sensitive to changes in light, autumn can be the warning sign that winter's darkness is creeping closer.

Winter tends to split people—some love the hibernation mode, others feel like they've been emotionally snowed in. Reduced daylight in winter has a real impact on brain chemistry. It can throw off your body's internal clock, disrupt melatonin production and lower serotonin levels making you feel tired or more down than usual. That said, winter isn't just doom and gloom. Some people genuinely love the calm, the quiet, and the excuse to cancel plans because it's too dark to go out." It's a season of comfort food, reflection, and finally getting your money's worth from that overpriced jacket.

Spring is like nature's big comeback. The skies get lighter, days get longer, and everything starts blooming—whether it's flowers or your general sense of optimism. Many people feel more energised and motivated in spring, thanks to rising serotonin levels and a bit of literal fresh air. But let's not forget the dark side of daffodils: hay fever, awkward outfit planning (coat or no coat?!), and the creeping return of social obligations. Spring is lovely, but it's also the season of seasonal confusion. You can leave the house in a jumper and come back sunburnt!

Of course, our emotional response to the seasons isn't purely biological. Culture plays a significant role too. If you grew up associating winter with holidays like Diwali or Christmas, chances are you've got some memories tucked inside those chilly months. Autumn brings Bonfire Night and Halloween, whilst summer means festivals, ice lollies, and everyone suddenly becoming obsessed with gardening.

The way you feel about the weather can say a lot about you. Whether you thrive in the sun or come alive in the frost, your seasonal mood is influenced by a mix of brain chemistry, social

expectation, and your own personal memories.

And hey, if all else fails, just remember: in the UK, you can usually experience all four seasons in a single afternoon

Queerious minds

I'm not sure how many of you read The Columns, but I would like to put a little article here about the schools one and only LGBTQ+ Club: Queerious Minds.

Coming to the club, supporting the club, or filling out any forms for the club does not make you gay or straight or an ally, unless you want to be of course!

Right now, Queerious Minds is going through a transition phase. With our supporting teacher leaving and our last non F1/2 member gone, the club has now fallen empty.

Don't worry though, we have two keen members of Queerious Minds to take over. Recently, you might have seen them handing out leaflets throughout the school or to group tutors.

Now, they have sent out a form to pupils asking them to fill it out, so let me give you some information on it. The form consists of a low number of questions, mainly ratings or pick-a-choice questions. Filling out this form does not make you gay or straight etc, it helps Queerious Minds know what to do to help you. Maybe it's more campaign, less campaign, more events or less events.

Also, for teachers: Queerious Minds is looking for a replacement. Their job will be to monitor the club and supervise.

Queerious Minds is on Friday lunch (so bring your food) and have fun! Any questions about the form, please email back to the sender and any questions in general, I'm sure our F1 and 2 members will love to help, as will (hopefully) most adults



Berlin Trip 2025

“Ich bin ein Berliner” President John F. Kennedy famously said this in 1963, as a sign of empathy to the German people. He was trying to say I am a Berliner, but what he actually said was I am a jelly donut. Why am I writing about a famous translation mistake? Recently I was fortunate enough to go on the school Berlin trip, run by the History and Modern Studies department. The trip was excellent and had something for everyone.

We went to many historical sites from different eras ranging from the unification of Germany, WWII, and the Cold War. I couldn't possibly go over everything in one article, so I will focus on the highlights. The first place we visited was the Brandenburg gate which was lit up beautifully at night. Nearby to it was a hotel where Micheal Jackson filmed a famous music video.

One of the more memorable landmarks was the Jewish Holocaust Memorial which was built to mourn and honour the fallen Jews. The memorial is a group of stone tablets which the further you went in became taller and more like a maze in an attempt to recreate the trapped feeling and fear the Jews felt.

We also visited Sachsenhausen Concentration Camp. The barracks were made into a museum showing how Jews were treated in Germany during the lead up of the construction of concentration camps, we were also shown the fake hospital where the Germans killed many prisoners. Nearby was where the SS trained and is now where the police train. In the afternoon we went to the building where the Wannsee conference was held, this is where they organised the infamous final solution.

On the final day we went to the Olympic Stadium, which was built for the 1936, Olympics. The stadium has a picture of Jesse Owens due to him winning four gold medals in the 1936, Olympics. In more recent years this is the stadium where Usain Bolt set the world record for 100m, and the stadium is rented out to the local football team and is used for concerts.

My favourite stop was the Resistance Memorial Museum where we learned how different groups of people resisted the Nazis, such as The Red Orchestra, young people and The White Rose. There was information on Operation Valkyrie which was an attempted coup by Nazis to take control for themselves and would later become a film starring Tom Cruise.

I may have only mentioned the history sites, but this trip had so much more; music, sports, food, and shopping, there truly was something for everyone. The Berlin Trip wouldn't have been possible without the hard work of the teachers. Thank you very much to Mr Fyall, Mrs Craig and Miss Douglas for their hard work and giving up their time to take us on this fantastic trip. I highly recommend it to anyone who has an interest in history and who knows along the way you might even find a jelly donut in a German market!

THE EPIC OF GILGAMESH

Tom Johnston

I am going to tell you about immortality, and how you can achieve it. But first, I'd like to tell you about a very, very old story called the Epic of Gilgamesh.

The Epic of Gilgamesh is an Epic poem written in roughly 2000BC in Mesopotamia, and is the oldest surviving work of literature. The Story starts with a description of a powerful and tyrannical King called Gilgamesh. The gods of the Mesopotamian religion decide that Gilgamesh needs to be stopped, and so they create and send a man called

Enkidu to oppose him. After a huge fight scene, Enkidu and Gilgamesh decide to stop fighting and work together instead (and possibly start dating, the tablets that it is written on are missing a few pieces!). They go on adventures together, and eventually they kill a sacred bull of the gods, the Gods curse Enkidu and he tragically dies.

After this, Gilgamesh is devastated by this death and begins to fear his own mortality, and so he decides to attempt to achieve immortality for himself. He journeys across the world to try and find a way to become immortal, and meets many characters along the way who try to advise him that his mission is fruitless. Eventually he finds a plant that is able to give him immortality if he eats it, but it gets stolen by a snake before he can. He returns defeated to his home city, still mortal.

I don't believe this is the end for him, however. I believe that Gilgamesh actually did achieve immortality in the end. I believe that, outside the tablets of the epic, out in the real world, Gilgamesh did eventually achieve immortality. This immortality did not come from a plant, or a benevolent deity, instead it came from from the legacy of Gilgamesh, and the clay tablets he inhabited.

The epic of Gilgamesh was similar to what Shakespeare, or Edwin Morgan, is to us today. Every school in Mesopotamia would study him, and his text, recreating thousands of copies. Because of the sheer number of copies, even now, four thousand and twenty-five years later, we still know his name, his story, his life. We still know who he was, what he did and where he went. Even though Gilgamesh is a fictional character, I believe that these principals of immortality apply to real life as well. We shouldn't try to live as long as we can, in fear of death like Gilgamesh, we should spend our lives trying to live forever with our actions, the changes we can all cause in the world and in the memories of those we love. This is the only way you can achieve immortality

Tau - A new circle constant?

Haoqi Liu

What exactly makes a number so important that we should celebrate it twice a year? Or calculate over 100 trillion digits of it? Or even spend a day reciting 70,000 digits of it in front of a Guinness World Records official? And what if this number is *wrong*?

I don't mean that in the literal sense that it's factually incorrect, but it's an unnatural choice for the circle constant.

The first significant publication regarding this is *π Is Wrong!* by Bob Palais. He explains that choosing $\pi = 3.14159\dots$ to be the circle constant is very counter-intuitive. Using 3.14... introduces unnecessary factors of 2 everywhere, which depending on the situation can be anything from impractical to baffling (more on this later). He suggests a more sensible circle constant $\tau = 2\pi = 6.28318\dots$. The symbol π with three legs didn't catch on, but the idea did.

Fast forward to 2010 and this gets serious. Michael Hartl publishes *The Tau Manifesto* which, put simply, elaborates on Bob Palais' article and presents a very powerful and long-winded argument against π . He suggests using the Greek letter τ (tau) to represent 2π . It involves some very complicated maths, and I don't expect a secondary school audience to understand it all. (I can't understand it!) Soon after, in 2011, MSC publishes *The Pi Manifesto* which rebuts the arguments for

tau. Then *The Tau Manifesto* rebuts those arguments yet again. It really is a big debate now. However, I can explain some of the more simple arguments for and against tau here.

First we must understand that the definition of a circle is the set of points with a fixed radius around a centre. This means that fundamentally, we measure circles by their radius, which suggests that a more natural circle constant is $\frac{C}{r}$ instead of $\frac{C}{D}$. This would give us $\tau = \frac{C}{r} = 6.28 \dots$ Tau wins this one.

However, we need to consider the practical applications of maths, namely, engineering. If you're ordering beams for a bridge, you're probably going to buy them based off of diameter, and not radius.

It's a lot easier to measure the diameter of something than the radius, so $\pi = \frac{C}{D} = 3.14 \dots$ Additionally, in the past, people probably used the diameter because it was much easier to measure, which was why π was chosen initially. Pi wins this one.

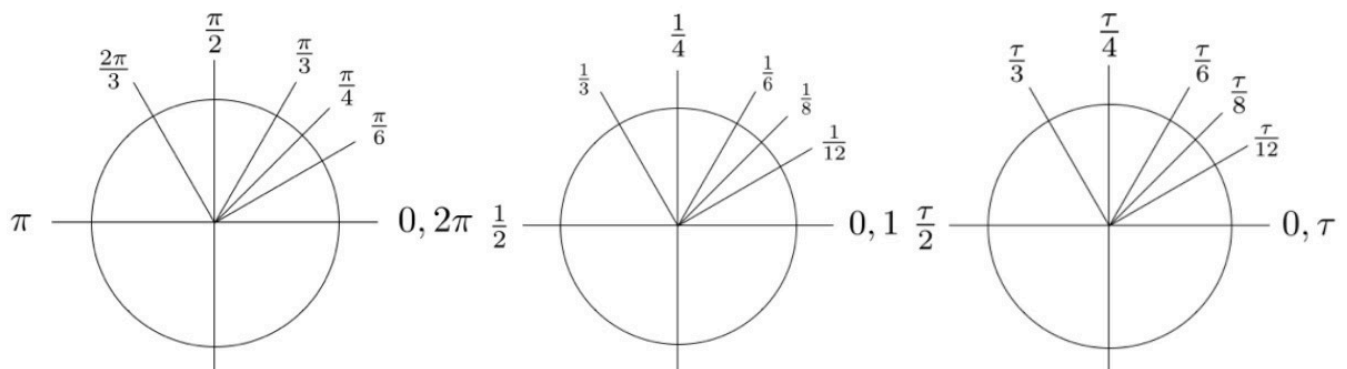
A fairly large argument for tau is that it makes lots of formulae simpler, by not having unnecessary factors of 2. Both manifestos provide long lists of cherry-picked formulae demonstrating why each constant is better. Wikipedia does actually have a page called *List of formulae involving π* .

Checking the list shows me that there is roughly an even mix between formulae where pi is better, formulae where tau is better, and formulae where it doesn't really matter what you use. If you plan on checking this for yourself, it is important to weed out any formulae which derives pi, and only the ones that use pi. No winner for this one.

Time to compare mathematical elegance. *Euler's formula* states: $e^{i\theta} = \cos\theta + i\sin\theta$. This is the most complicated thing I will talk about in this article, and many readers might not know what this means. It's too complicated to explain here, but it is one of the most famous and important things in maths. If we take $\theta = \pi$ then this becomes *Euler's identity*, $e^{i\pi} = -1$ which is not particularly elegant, so it is often rearranged into $e^{i\pi} + 1 = 0$. But what happens if we take $\theta = \tau$? We will get $e^{i\tau} = 1$, a far nicer and more elegant identity. Another win for tau.

However, this elegance comes at a cost. The elegant formula for the area of a circle is $A = \pi r^2$. Put τ into this and it becomes $\frac{1}{2}\tau r^2$. The half there is nasty, but *The Tau Manifesto* argues that this fits into the common format for a quadratic form, due to the way integrals work. This is true, looking at other well-known formulas such as $E_k = \frac{1}{2}mv^2$ or $s = \frac{1}{2}at^2$, however, is it worth fitting in if it makes it more annoying? *The Pi Manifesto* also states that the area of a unit circle (circle with radius 1) is π , which is elegant and comes into something else (read two paragraphs on). Using τ would ruin this.

Now for probably the strongest argument in favour of tau, angles! Radians are the natural unit for measuring angles, where it is the angle enclosed by an arc of length 1 in a unit circle, so that there are 2π or τ radians in a full circle. Having 2π radians in a circle is a recipe for disaster, as it creates a fraction mess. How much of a circle is $\frac{\pi}{4}$ radians? If you said $\frac{1}{4}$, you are wrong, it's $\frac{1}{8}$. Look at the three diagrams below. Using tau gives a much more intuitive approach to measuring angles. I have actually experience this myself, where I was practising some A-level maths: Convert these angles from radians to degrees. I was considering not doing this practice because it felt so easy, but... guess what. 0/3 correct. Potentially the most confusing part of A-level maths. Monstrous win for tau on this one.



The Pi Manifesto responds to this one by saying that the area of a unit circle corresponds to fractions of a unit circle in terms of π . While this is correct and also quite elegant, this is a much more niche case than above.

Suppose we did want to change to tau, would this even be possible? I think yes. By having a separate symbol, it is obvious what convention is being used, so there would be no ambiguity. It is also not too difficult to switch to this new approach because it does not involve huge, sweeping changes to how we do maths. Of course, all symbols will have conflicts, but tau's conflicts are fairly limited, the most significant ones being shear stress, torque and proper time. Where this happens, we can simply change notation up a bit, for example, τ_p for proper time, or even a subscript for the circle constant itself. Sometimes mathematics will even just deal with it. In this example, there's e's scattered everywhere, some of them mean Euler's number (2.71828...) and some of them mean charge on an electron.

$$\psi(r) = \sqrt{\frac{1}{\pi a_0^3}} e^{-r/a_0} = \frac{m^{3/2} e^3}{\pi^{1/2} \hbar^3} e^{-me^2 r / \hbar^2}$$

Of course, π has millennia of tradition behind it, and it shows up in countless books, formulas, and classrooms around the world. That's a tall order to undo overnight.

So there we are, some arguments for pi, and some arguments for tau. Both are useful in their own places. Tau is certainly a modern thing, but many platforms are starting to adopt tau and facilitate its use. However, I believe tau should definitely be more known within our society, which is why I have written this article. Whether or not tau replaces pi, this debate reminds us that even the foundations of maths aren't always set in stone. Sometimes, questioning the basics leads to clearer thinking—and potentially better maths. Just like pi day, tau day is celebrated on the 28th of June, coming up soon.

Happy tau day when it comes!

Personally, I prefer tau more, however I believe that arguments for pi are still very reasonable and pi certainly has its uses. I think the largest factor for me is the mess that pi makes of angles, which has confused me way too many times.

A final note: MIT (Massachusetts Institute of Technology) announces admissions on 3/14 (American date) at 6:28 pm.

Further reading:

π is wrong! - Bob Palais, 2001

The Tau Manifesto – Michael Hartl, 2010

The Pi Manifesto – MSC, 2011

Editors' note

Many thanks to everyone who contributed to this weeks edition. We hope you took at least something away from this: whether that was a rekindled love for the Hunger Games, Marvel or perhaps learning something new about the seasons. Heres to many more editions. Many thanks - from your editors Charlie and Emma