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Editor's Note:

The JWP is a periodical with a self-consciously academic purpose: to give a platform to the student voice, and by exploring disciplines beyond curriculum, the writers on the JWP hope to inspire the interest of their younger readers. In addition to this, super-curricular activities - so termed by Oxford and Cambridge - form an important part of developing and expressing a passion for these disciplines, and so a tripartite purpose exists. Each half-term, the JWP will feature articles by both regular and guest writers on the arts, sciences, and humanities, as well as an interdisciplinary philosophy section. The theme of this half-term's issue is power and privilege: how and why power expresses itself, and how we can resist. This issue also features a variety of new voices from year 12, alongside regular writers from the year above.

Be advised: this article contains reference to sexual violence

When words speak louder than actions

The dangerous culture of powerful white men in Hollywood

Power has the potential to be something incredible that can change the world for the better. When someone has an important message to spread, human rights to fight for, lives to save and a platform to voice said issue, history is made. There are innumerable examples of powerful individuals who have been committed to a cause and have channelled this commitment to fight for justice and ultimately bring about equality for all: Martin Luther King Jr., Emmeline Pankhurst, Nelson Mandela, Maya Angelou, Muhammad Ali, Malala Yousafzai. All of these men and women have used their experiences and their background to campaign for the rights of all human beings, and in one way or another have left imprints in society that can never be forgotten.

The problem with power is when it falls into the hands of the wrong people. There is no doubting the fact that we as a human race have the tendency to be rather selfish, whether that be on a smaller or larger scale. Selfishness is not an attribute that is valued, and nor should it be, but it is part of human nature. It can be argued that there is no escaping feelings of self-interest at some point in life. This argument is all well and good, but it only goes so far. Where do we draw the line with excusing and dismissing self-indulgent behaviour as ‘just a way of life’? How can we differentiate between right and wrong? This appears to be a difficult

Jessica Scaffidi Saggio

ty for those who are in high positions of authority; take, for example, the 252 celebrities, politicians, CEOs and others who have been accused of sexual misconduct since April 2017. 252 prime examples of people who became shrouded within their own power. Perhaps one of the most intriguing observations when looking through this list compiled by Vox is that 246 of these abusers are men (98%), and the largest proportion of abusers (97) fall under the arts and entertainment category. Among these ‘stars’ are Morgan Freeman, James Franco, Sylvester Stallone, Ben Affleck and, most notably, Harvey Weinstein.

These abusers have used their power to render their victims powerless, by disregarding and disrespecting their right to say no in a bid to assert their own dominance. In a Harvard Business Review article Dacher Keltner, professor of psychology at University of California, states that over the course of the last 25 years he and a group of other social scientists have conducted research illustrating that when an individual feels powerful, their manner of behaviour and conduct completely changes – known as the ‘banality of the abuses of power’. Keltner writes that groups of people labelled as ‘powerful’ in their research developed empathy deficits and were also less able to read the emotions of others. More topically,

many studies show that powerful men overestimate the sexual interest of others; they believe that the women around them are more attracted to them than is actually the case. These powerful men also sexualise their work, leering inappropriately, standing too close and touching women – emulating the behaviour of Weinstein, among the other hundreds of accused abusers.

The power that abusers exert extends beyond just their victims. They also use their authority to coerce the third parties in the situation not to tell anybody about the situation. Take the Harvey Weinstein situation: Gwyneth Paltrow came forward to tell the world that Weinstein harassed her in 1994; British actress Lysette Anthony says Weinstein raped her in her home in the late 1980s; actress Uma Thurman told the New York Times that Weinstein attempted to assault her in the late 90s. Since the 5th October 2017, when the New York Times released an article detailing the decades of sexual abuse allegations made against Weinstein, nearly 100 women have come forward to say that Weinstein has abused them at one point or another during their career, predominately Hollywood actresses, or aspiring actresses who never rose to fame because of Weinstein’s threats. This means that Weinstein’s heinous behaviour has been on-going for over 30 years.

There is no way that such a high profile director, having worked with thousands of movie stars, could have completely got away with this abuse for 3 decades. Someone must have known – and they did. If you type into Google ‘people who knew about Harvey Weinstein’, an abundance of articles come up concerning all of the actors and actresses who knew what Weinstein was doing. One article from the Frontline states that Quentin Tarantino – arguably one of the world’s best-known film directors – told the New York Times that he “knew enough [about Weinstein’s sexual abuse] to do more than [he] did”, as well as saying that “we allowed it to exist because that’s the way it was”. It is sad that such nauseating behaviour was justifiable and dismissed at the time because it was seen as just a part of Hollywood culture. The fact that so many important and famous figures within the same industry didn’t act on it is just as upsetting. This is the nature of power. Weinstein and the other public figures accused of sexual abuse are able to scare their victims with threats of ruining their careers, even their live. The third parties who are aware of what is going on also fall into this trap; rightly or wrongly, they worry about the careers they have worked so hard for when keeping their mouths closed. Power, pride and fear all come together in this situation to be a lethal combination in preventing justice and allowing abuse to continue.

In the last few months, the #MeToo movement has come to life, a movement which encourages sexual abuse survivors to talk about what they have endured and ultimately recover

from their experiences. This movement has allowed men and women alike to find their voice and – in time – heal, alongside people who have been through the same things as them. To a certain extent, this movement has allowed the survivors to regain the power that was taken away from them by opening up about their experiences. Many people wrongly think that an individual’s life can go back to how it used to be – once they have told someone about their sexual abuse and their abuser goes to prison, everything is good and just again. In reality, the victim has to undergo a painstakingly long process in which people challenge whether or not they are telling the truth, people try to justify the abuser’s behaviour, and so on. Of course, not everyone is going to be so dismissive; there are of course going to be many people who are supportive, compassionate and actually trust in what the victim says. But all you need to do is look at the 20 women who have accused President Donald Trump of sexually harassing them – his spokesperson Sarah Sanders claimed that all 20 women were ‘lying’ and Trump himself suggested that some of those 20 women were not attractive enough for him to rape. His own ex-wife, Ivana Trump, accused him of sexual misconduct. She is now not allowed to talk about her marriage with him without his permission. He is still the President of the United States. His power is intact. So much so that he has taken his ex-wife’s voice away from her, silencing her as well as the other 20 women in this situation. He gets to live his life, let off scot-free, but what do these women get? “Take a look at her. Look at her. I don’t think so,” were

Trump’s exact words regarding Natasha Stoyanoff, a People magazine reporter who accused him of molesting her.

Let’s take one final look back at Harvey Weinstein. Nearly 100 sexual abuse allegations have been made against him in the last year, yet he repeatedly denies his actions. Perhaps he thinks that because he is powerful (or at least was, *extremely* so) that he will be able to get away with lying and that people will believe him. This shouldn’t be the case; we should *all* be listening to the victims and not to Weinstein. But even now, as he is venturing back and forth to court, the Manhattan DA has dropped parts of his case and New York criminal lawyer Stuart Slotnick said some cases may be difficult to pursue because of ‘statutes of limitations’, even in the situations where it was found that there was enough evidence. Granted, this is not a result of Weinstein himself swaying the Manhattan DA with his well-known status and convincing them to let him go with just a slap on the wrist – that we know of. But the fact that he is even in this situation is a direct consequence of his dominance. Of course, this is an extreme example of what can happen when power is abused. Yet, even given the introduction of the #MeToo movement and many other organisations for sexual abuse survivors, sexual harassment is on the rise within society and especially within the workplace. It is something you need to think about: why is it that the voices of a few of the most powerful men seem to outweigh the voices of everyone else?

The power of film

Why we should look to the silver screen for the future

In the modern day, film - both big screen and small - is one of the most popular and mainstream ways that people can tell a story and provide a new narrative. Movies and TV shows have the power to provide an audience with a whole new perspective and outlook on life. Film has the power to change the way people tackle subjects like equality, race and mental health issues and initiates conversations about them. From thrillers to horrors to dramas, each movie or show tells a story that can have the power to change the world.

It would be difficult to discuss the power that movies have in the modern age without citing Jordan Peele's 2017 horror/thriller 'Get Out'. In 'Get Out', young, African-American photographer Chris (played by Daniel Kaluuya) visits his white girlfriend's parents for the first time. At first, Chris reads the family's overly accommodating behaviour as attempts to deal with their daughter's interracial relationship but, as the weekend progresses, he discovers that his girlfriend and her family planned to auction him off in order to have his consciousness replaced with that of a white artist. 'Get Out' poses themes of racial inequality and subverts the expectations of the 'white saviour' trope and the as-

Harriet Morrison

sumption of guilt in characters that aren't white. Peele creates a world that is believable to us; a world that, in a metaphorical sense, is a reality to many people of colour around the world, especially in the United States. For audiences, this opens up conversations about how people of colour living in the US have to deal not just with the unequal tropes in cinema, with traditions of the white characters coming out on top, but also inequalities in their everyday life, like racial profiling from police officers, which we see in the film. Peele's 'Get Out' demonstrates the power that films have to create change through the subversion of tropes and the sparking of conversations about the lives of ethnic minorities and racial inequalities that these people experience on a day to day basis.

There have been many movies and TV shows that tackle the seemingly taboo subject of mental health, such as Barry Levinson's 1988 melodrama 'Rain Man' and Darren Aronofsky's 2010 drama 'Black Swan'. Although those movies received widespread acclaim for their portrayal of mental illness, no other film or TV show has sparked such a debate

about the proper portrayal of mental health like Netflix's 2017 teen drama series 'Thirteen Reasons Why'. In this adaptation of the novel by Jay Asher, a female high school student named Hannah Baker commits suicide after battling with mental health issues and the struggles of high school. She leaves behind thirteen pre-recorded tapes that implicate twelve of her fellow classmates as the thirteen reasons why she committed suicide. The show tackles themes of moral responsibility, mental instability and sexual assault, commenting on the lives of high school kids. Although the show confronts the nature of suicide and mental health, it has been severely criticised for its portrayal of those themes. Many critics say that the way that the show tackles suicide was problematic: that it sends the message to young viewers that suicide is a viable option for solving problems as Hannah doesn't seek the help of her parents, which is significant when you consider the audience that this show had when it was first released - approximately 98.75 million people were signed up for Netflix in the first quarter of 2017, when the show was first aired - and the impact that kind of message can have on younger.



more impressionable viewers of the show. Yet, through this criticism, ‘Thirteen Reasons Why’ started a debate on the portrayal of mental illness in media. This shows that, even if it is unintentional and even if it isn’t on the big screen, film has the power to create discussions as to how certain themes are tackled, help further conversations surrounding mental health and, through its criticisms, push for a more accurate portrayal of mental health issues in mainstream media.

The topic of homophobia and HIV have been somewhat taboo in western cinema; it is seen as something that isn’t talked about in mainstream media. So when a movie starring A-list actors explores the life of a man living with AIDS, it has the power to create a conversation about such subjects: enter ‘Philadelphia’. Directed by Jonathan Demme and starring Tom Hanks and Denzel Washington, drama film ‘Philadelphia’ was one of the first mainstream films to acknowledge HIV/AIDS, homosexuality and homophobia.

Lawyer Andrew Beckett hides his homosexuality and HIV status from his employers at a law firm in order to keep his job secure, however, when colleagues spot telltale symptoms of the illness, he is fired. After, Beckett decides to sue for discrimination and teams up with Joe Miller, the only lawyer willing to help him win the trial. During the court process, Beckett is met with discrimination from the opposition due to the fact that he is a homosexual - a reality for many people during the AIDS epidemic. The movie depicts the illness in a way that shows what it is truly like for people suffering from it and what it was like for members of the LGBT+ community of the time to experience discrimination in the workplace and even in court. Additionally, through the character of Joe Miller, we are shown the way people deemed members of the LGBT+ community who suffered from HIV as the ‘other’, how that affected them and how - as Miller does in the film - they can break through this label and see people with HIV as just regular people and

not oddities. Being one of the first mainstream Hollywood movies with A-list actors like Hanks and Washington to depict the lives of many people suffering with AIDS during that time, it helped break down the ‘taboo’ of these subjects and demonstrated the power to change a society’s perception of the supposed ‘other’, just like Peele’s ‘Get Out’.

Cinema and television nowadays dominates the public eye with summer blockbusters and seemingly aimless and sometimes endless stories. Yet, movies hold the possibility of cathartic reflection for those who tune in and allow themselves to truly listen. Movies and TV have the power to enable a new way of thinking by providing an immersive narrative, a narrative the audience member may not be aware of or may even be complicit in marginalising. Film, be it big screen or small, has the power to spark conversation on how topics are handled and allow storytellers to send a message to society: one of acceptance, empathy, and enlightenment.

Playing God or just plain stupid?

Why we shouldn't be excited for commercial cloning

James Mitchell

The idea of cloning gained a large social presence back in 1996, when the Roslin Institute in Scotland successfully cloned a sheep, 6LLS, also known as Dolly. However, despite Dolly's success, the first 277 attempts that came before her were not so lucky. From this scientific marvel, it became clear that cloning was possible, but it wasn't clear why the possibility of cloning was desirable. As expected, people went into a frenzy.

In recent years, the lines have blurred between morality and mortality in light of new scientific advancements, paving the way for death defying feats and some questionable decisions.

Barbara Streisand is just one in an increasing number of people choosing to clone their pets. Streisand sent the DNA of her 14 year old dying dog, Samantha, to a Texas based company that offers animal cloning, ViaGen. Not long after Samantha died, Streisand received two dogs, both clones of her original dog. The cost of the cloning procedure with ViaGen is said to be at least \$50,000, so at this moment in time only those with the economic capacity and dubious moral compass, or simply those who are purely barking mad, can afford this 'luxury'. Despite the fact that Streisand has two clones of Samantha, she has said



that, as of yet, neither clone acts like Samantha did; this is due to our ability to clone only the cloning of genetic material of a being, rather than the being's personality or 'soul'.

Yet another scientific technique on the rise is embryonic gene editing to create 'designer babies'. Now, despite the fact that some cases of gene editing may be considered 'ethically permissible', this concept can very easily be abused in order to manipulate embryos to suit certain ideals, such as increasing IQ, choosing eye colour, hair colour or even the child's sex. This poses as the ethical paradox of commonly known as 'playing God'. Moreover, it would result in the eradication of uniqueness and our values of differentiation between individuals, and how this affects us as a part of a larger society – a mutation is said to occur every 10 million base pairs (that's at least 30 mutations per generation!), and that's just one factor that plays into individualism within our species.

In television shows and movies, there have been many dramatic examples of cloning and the abuse of power that follows. In shows such as Orphan Black, Black Mirror and Blade Runner the principle of cloning is explored and a dystopian side to the possibility of human cloning is demonstrated. Although it could be argued that the fear of human cloning may be heavily influenced through these negative media portrayals, it should be noted that they also stand as a warning of truly how twisted humanity can become in response to twisted experiments.

Another, more distressing, problem that follows in the shadow of cloning lost pets is the desensitisation of death and grief within our society; this would degrade the very foundations of the value of human life. How would humanity function if everyone felt that a loved one could be replaced just as easily as they had died?

She must go and I must mourn

The relationship between speaker and addressee in Donne's celebrated poems

Ostensibly, Donne's poems 'A Valediction: of Weeping' and 'Elegy 12: His Parting from Her' are about love. If this is given, then the primacy of the subject, usually also the addressee, follows naturally. The relationship between speaker and addressee in Donne's work, however, is more complex than that of a poem written for and about a lover. His work cannot be separated from the gendered power structures of the seventeenth century, having been shaped within them. Though not necessarily the product of direct commentary, the addressee is a reflection of these power dynamics, and so peripheral, acting as an object to the subject of the poems: the speaker. The addressee is not afforded the dignity of agency, or even a voice; this is an even clearer theme when the addressee is not the object of the speaker's love, but abstract concepts that the speaker then struggles with. Donne may construct 'little [worlds]', but they are necessarily constructed within his wider social context and ideology.

'A Valediction: of Weeping' fulfils many of the conventions of love poetry. Directly addressed by the speaker to its object, the poem is about the moment of parting between two lovers, a concept Donne used often. The speaker has not yet left the addressee, but her physical proximity does nothing to elevate her status beyond that of object. Whilst present in the setting of the poem, this presence is voiceless and without agency – the only action she performs is crying, and even this is implicit, serving as a method for the speaker to progress the poem and take on a didactic role. Whether Donne actively exploits the period's cultural gender roles of men and women, or these are taken as given, the didactic role is domestic and recognisa-

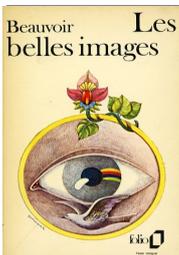
Tabitha Dunthorne

ble within the seventeenth century. The male speaker exhorts the female addressee to stop crying for fear it would 'do...harm', using complex conceits, with tears as coins and fruit in the first stanza, globes in the second, and seas and tides in the third. The complexity of these characteristically Donnean conceits – contributing to Dryden's condemnation that he 'perplexes the minds of the fair sex' – further serves to establish intellectual dominance in a poetic setting where the addressee remains voiceless.

It was not until the Married Women's Property Act of 1870 that the money a married woman earned was considered hers, and not her husband's. This, along with the fact that most women could only receive an education if they were privately tutored, which focused predominantly on their future roles as wives, and could not attend university, meant that women in Donne's time period were dependent on the judgement and education of the husband; the didactic role was fulfilled by the husband. This establishes an unequal power dynamic between speaker and addressee, one steeped in cultural connotation, where the role of the addressee is marginalised besides the mental dominance of the speaker in a reflection of domestic power structures. The addressee is peripheral; she is an object who lacks intellectual power, rather than an agent. Other readings of Donne have considered the significance of the economic and legal structures of seventeenth century society with regards to gender; Hobby observes the 'loss of selfhood' both as a feature of marriage – the 'identity of a married

woman was subsumed in that of her husband – and as a feature of Donne's poetry. She applies this idea to A Valediction: Forbidding Mourning, although it's equally applicable to A Valediction: of Weeping. The lovers 'sigh one another's breath' and even the speaker's tears are 'pregnant of' the addressee – a reversal of roles, the feminine 'pregnant' applied to the tears of the male speaker, that serves to enforce their interchangeability. There is only the illusion of equality, however; the addressee becomes absorbed into the speaker, who maintains dominance through the very act of speaking for them both.

The nature of this union is significant. It is destructive; the lovers are in a state of utter vulnerability to one another, as 'whoe'er sighs most...hastes the other's death'. The merging of the two identities results in one that cannot sustain itself, one trapped in an internal power struggle until its inevitable breakdown. Any shift in power – one lover taking in more or less breath – will result in this breakdown. This sentiment can be read conservatively; the relationship between speaker and addressee becoming microcosm for the pre-existing gender power structure, the roles those genders perform are necessary to maintain order and must remain distinct, enforced by the temporal urgency in 'hastes the other's death'. The subversion of the speaker's masculinity is harmonious with this reading, in the application of the feminine 'pregnant' to the male subject and then her ability to 'drown' him – it is in the gradual surrendering of power to the female addressee, at first limited mutuality and then the power to end his life, that has resulted in the damaging situation.



November Book Recommendation: Les Belles Images - Simone De Beauvoir

This book is a fun mix of existential dread and stylish French people. Simone De Beauvoir's feminist and existentialist philosophy bleeds into this work, as it examines the evolution of human relationships in a post-God world. The lives of the upper-middle class are shown to be as superficial as our perception of reality, though escape from this superficiality may not be as easy as escape from reality.

The historical context lends itself to this idea – Benet, writing in *Modern Philology*, proposes that ‘Donne was prompted to question the distinctions and relations between the sexes by a public controversy [on changing sexual roles]...from 1540 to 1640’. Donne was labelled by Samuel Johnson as ‘metaphysical’, but his poetry may have been merely reactionary to the shifting Renaissance society around him.

‘Elegy 12: His Parting from Her’ has the similar central premise of lovers having to leave one another, but is more structurally complex, addressing four figures: Night, Love, Fortune and the mistress. The speaker takes precedence above all of these figures, however. It begins elevated above specific events with the repeated modal verb ‘must’, which imbues the dramatic situation with a kind of cosmic inevitability, enforced by invocations of the stars, the goddesses of the moon and love, and direct reference to ‘conspiring destiny’. The roles and actions of the speaker and his addressees are therefore placed into a condition of ontological necessity, one that allows the speaker to seem an observer severed from responsibility or agency. Once in this position, the speaker is enabled to systematically examine the relationship of the lovers in a static setting, with abstract concepts used to embody physical emotional experiences. This marginalises the role of the addressee, who merely becomes the extension of the experience of the speaker himself; it appears metaphysical, not reactionary. This metaphysical appearance may be employed to create the distance necessary for implicit criticism or social commentary with a greater degree of moral authority by its indirectness, however.

It’s noted that the mistress in this poem is a married woman, and her husband the ‘theme for the impudent wit of the elegy’. This defies the aforementioned ‘loss of selfhood’ that is supposed to arise with marriage – instead her self is lost in another, her soul ‘ty’d’ to the speaker’s. The role of the husband is usurped illicitly by the speaker; when

the speaker addresses the mistress in lines 83-104 he takes on the didactic role and becomes consolatory, giving her advice to ‘drown night/with hope of day’. This power struggle is entirely implicit, but is one that the lovers’ are constrained by – she ‘must’ go. The conflict can be felt throughout the elegy, with the speaker’s tone confrontational and argumentative when not addressing the mistress, in the masculine rhymes of each couplet and the many questions he addresses to the figures of love and fortune – not quite so sure of himself as when he addresses the mistress with imperatives. It can be felt in the description of these figures too, with the intimacy of the lovers compromised, having ‘correspondence whilst the foe stood by’ as a malignant, voyeuristic force. The love he feels is eclipsed by this implicit power struggle: 83 of the 104 lines of the poem – a significant majority - are addressed not to his mistress, but the forces that seek to drive them apart; the condition of the poem is defined by the lack of her, not by his love for her; he spends the poem trying to prove that love to the figures that attempt to drive them apart. Although it appears as though there is resolution by the poem’s end, with him claiming the constancy of their love and their spiritual union in their ‘ty’d’ souls, this is called into question by the role of the speaker. The poem reads as a monologue of a man trying to convince himself of the resolution he reaches, beginning with his emotional agonies of ‘hell’ and ‘darkest magic’ and tracking his attempts to reason why he faces that suffering, ending with unconvincing positivity as he swears his eternal love. The reliability of the speaker is questionable, and as a result so is his relationship to the final addressee, the mistress. This is not a celebration of love against the conventions of society; this is a situation that cannot reach resolution, emotionally or literally – the presence of the husband cannot be dispelled and so the speaker can never possess the mistress legally even if he claims to possess her emotionally. The prevailing tone is that of struggle against and then acceptance of her departure.

This, too, can be read conservatively; challenging the social conventions of marriage and defying established gendered roles cannot be successful, particularly in hedonistic pursuit of sensual or emotional gratification.

The role of the addressee is even more secondary in this than in ‘A Valediction: of Weeping’ because the poem is not about love, the abstract concept or its object as she appears to the speaker, but the power struggle it entails within a wider social context. As Benet observes: ‘the Elegies are not... love poems. Most of them are less interested in the inner world of emotion than in the outer world of social interactions impinging upon any relationship they might sketch’. Resolution cannot be reached in this context, and the shifting relationship between speaker and the four figures addressed is reflective of that.

The relationship between speaker and addressee within Donne’s poetry is often conventional, as the subject of a love poem or the abstract concepts that represent the emotional experience of love. This conventionality is deceptive - this relationship is highly complex, and reflective of the power structures found within seventeenth century society, perhaps even Donne’s own commentary – despite apparently being ‘metaphysical’. The addressee is, however, peripheral in his poetry, rather a vehicle for the speaker to explore their own ideas or an object onto which they can project them. There is a distinct power imbalance between speaker and addressee because of this, but the imbalance existed prior to this feature, because of their genders; the cultural associations of gender in seventeenth century society are exploited – or at least inadvertently echoed. The relationship between the speaker and addressee is therefore not primary, because the poems are only *ostensibly* about love.

Further reading on this topic (all essays are accessible on JSTOR):

- Bates, Catherine. 2011. "Desire, Discontent, Parody: the Love Sonnet in Early Modern England."
 Benet, Diana. 1994. "Sexual Transgression in Donne's Elegies." *Modern Philology*
 Hobby, Elaine. 1993. "The Politics of Gender."
 Jones, Freda. 1968. "Meaning and Metaphor in Donne's Elegies."

A Recipe for Consciousness

The necessary decay of anthropocentrism

The Copernican Revolution was undoubtedly the most influential paradigm shift of the 16th-century. Priorly, the Ptolemaic model had been widely accepted, placing the Earth at the centre of the solar system map. This geocentric model, which was based on the ideas of Ancient Greek natural philosophers, Aristotle and Ptolemy, fell subject to inconsistencies concerning the positions of planets at specified times. In reaction, the Copernican model was devised and revised over the 16th and 17th centuries by Galileo, Kepler and Copernicus jointly. The inconsistencies were fixed by postulating elliptical planetary orbits as well as a heliocentric mapping of the solar system.

The prospect of shifting from geocentrism to heliocentrism was extremely controversial in the early modern period and most churches banned heliocentric works right up until 1758. The proposal did not only encompass an alteration in the mapping of our solar system but a cultural shift from anthropocentrism to a worldview where the observer is irrelevant with respect to the physical laws of nature. Since the early modern period, a consensus has been achieved concerning the structure of the solar system and heliocentrism has reshaped the foundations of European astronomy. However, the debate on scientific values and our place in the universe is ongoing. This is made most evident by the contemporary debate on fine-tuning.

Intelligent life could not have developed on Earth should the structure of the universe have been just slightly different. The universe seems fine-tuned for conscious observers in three main areas. Firstly, the laws of nature: In the absence of gravity, matter would not have clumped, disallowing the formation of stars. All of the atoms we are composed of were synthesized in the stars that died before our solar system was born. Were there no strong nuclear force, atoms larger than hydrogen would not exist and the potential for carbon-based life would be eliminated. Further, without the electromagnetic force, no complex chemistry could have been sustained. Secondly, the constants of nature: The formation of stars and planets was also

Amber Amoo-Gottfried

reliant on the precision of constants in physics such as the universal gravitational constant and the cosmological constant, the energy value of free space. Scales of structure are dependent on these basic dimensionless constants, leading to some extraordinary coincidences. For instance, the average size of a human cell is approximately the geometric mean of the plank scale (10⁻³⁴) and the scale of the observable universe (10²⁷). Lastly, the initial conditions of the universe: The early universe had a low entropy state, allowing it to hold usable energy in accordance with the second law of thermodynamics. This state had to be precise by 1 part in 10¹⁰¹²³ for conscious life to arise. Philosophers and physicists alike approach the concept of fine-tuning with the hope of reaching more expansive conclusions about the place of humans in the universe. The modern debate on fine-tuning tends to focus on the following four theories.

Firstly, there is the God hypothesis. The conditions of the universe were set by a creator with the intention of life. In this way, the universe had to be suited for life. Many philosophers who adopt this view believe that, by recognising the significance of fine-tuning, an explanation is demanded that does not neglect its extremity, supporting the possibility of theism. Like geocentrism, this theory adopts an anthropocentric approach to reality. Critics argue that this solution only 'begs the question', however. A higher being with the ability to generate a life-supporting universe would have such complexity that the solution necessitates more explanation. In addition, if God is omnipotent, why should it be necessary that the universe is fine-tuned in order for conscious life to be possible?

Particularly in the wake of inflationary theory and the weak anthropic principle, many contemporary philosophers are turning to multiverse theory for the solution to the fine-tuning problem. The multiverse consists of an infinite number of regions of reality, all causally distinct

and varying slightly in their physical laws. In this case, it seems certain that a universe would be generated with the combination of physical laws that supports life. By applying the weak anthropic principle, it is also natural that such a universe would be ours; observers can only arise in a universe with the suitable physical conditions so, when the reality is questioned by observers, it will be from the perspective inhabitants of a universe that meets these conditions. Critics argue that this theory is equally as metascientific as theism and overlooks the intricacy of fine-tuning. Some supporters of this view note that God and the multiverse are not incompatible due to His omnipotence, combining it with theism with the aim of fully explaining the intricacy behind fine-tuning.

Thirdly, fine-tuning may simply be an illusion. There is no fine-tuning; the universe just happened to exist in a state suitable for life. Perhaps our eagerness to impose fine-tuning on the universe originates from our tendency towards anthropocentrism, as demonstrated by the development and persistence of geocentrism up until the mid-18th-century. This view risks critically overlooking a fundamental aspect of the universe. Conversely, perhaps the current state of the universe is the only possible way in which it could have existed. The universe's initial conditions were fixed and thus our current physical laws were determined. In this case, there may be a deeper, non-theistic, meaning behind our universe, central to why it could only exist in this manner. This route may once again lead to a concerning anthropocentric perspective on reality, however.

The modern debate on fine-tuning seems to test the place of anthropocentrism in scientific models and theories. Regardless, fine-tuning itself remains at the heart of conscious existence. Whether illusory or central to life, the phenomenon raises some very thought-provoking questions concerning our place in the universe.