

## Chancellor's Lectures 2010

### Human nature, hope, and how to live now

*Lecture Two, Tuesday 27 April*

Welcome to the second of this year's Chancellor's lectures: *Human nature, hope, and how to live now*. I'm grateful some of you were prepared to come back for another go! In the 1990s I attended a Brighton Festival event which included the scientist Lewis Wolpert and the novelist A.S. Byatt. During the evening, Byatt said that science had helped to increase our understanding of human nature, but didn't say how. When there was the opportunity for questions from the floor, I asked her about this. She replied as follows: 'I see you are a clergyman. In my view we are coming to the end of the religion.' I was a little deflated by this response, but perked up when a member of the audience lent across and whispered, 'Couldn't answer your question, could she?'

Well, one of things I have sought to do in preparing for this lecture is find out what Byatt couldn't tell me – what science tells us about human nature. Last week I explored some themes in philosophy and religion, touching on Plato's allegory of the cave, Jesus' teaching on seeing specks in other people's eyes while remaining blind to the log in your own, and Augustine's doctrine of original sin. We were left with an image of human beings as having great gifts and capacity for relationship, as symbolised by the religious notion that they are made in the image of God. But also of human beings as bound into habitual patterns of destructive behaviour, characterised by internal conflicts and disorientation, and with human desire and longing as least as important as reason and willpower in defining who we are.

This week I'm going to explore as best I can how this kind of picture compares with perspectives from literature, science and political philosophy. I'm going to start with the winner of the 1983 Nobel Prize for literature, William Golding. Golding, because he's written at least one book you all know dealing explicitly with human nature. I refer, of course, to that twentieth century literary classic, studied by generations of schoolchildren, *Lord of the Flies*. But more than this, Golding has also written a novel dealing explicitly with evolution, and so will provide a suitable bridge for moving from the literary to the scientific in the middle part of my lecture.

*Lord of the Flies* was Golding's first book, published in 1954. In order to understand it, however, we need to go back nearly a century to R.M. Ballantyne's 1857 novel for young people, *Coral Island*.

At the age of ten, I discovered a musty old copy of *Coral Island* at the back of a classroom. So it was I came to read this story of three boys, sole survivors of a shipwreck on a Polynesian island. Ralph Rover, Jack Martin and the wonderfully named Peterkin Gay have a blissful time to start with; they eat well of the abundant fruit, fish and wild pigs; they construct a shelter and, amazingly, a small boat, even though their only possessions are a broken telescope, an iron-bound oar and a small axe. Then things get more exciting, as pirates, cannibals and missionaries enter the story. The book ends with the conversion of all the natives on the nearby island of Mango, and the boys sailing for home, older and wiser.

*Coral Island* conveys not especially subtle assumptions – Victorian notions of progress, and that as my father used to say (but no longer) ‘British is best.’ Ballantyne’s boys have internalised the values of their civilisation, and are able to manage all that adversity throws at them, whether natural or human. In *Lord of the Flies*, Golding’s boys, admittedly younger, can control neither the environment around them nor their desires and aggression. But I’m getting ahead of myself. Let me give a little background to the author.

Golding was brought up by parents strongly committed to scientific rationalism and atheism. This did not entirely suit a boy inclined to fantasy and imagination, and although he ended up reading English at Oxford, this was only after a false start studying Botany in order to please his father. Golding did emulate his father in becoming a teacher, and in 1940 took up a post at Bishop Wordsworth’s School in Salisbury. He had just been sacked from Maidstone Grammar School for, on his own account, an ‘unacademic combination of drink, women and politics’. Before the year was out, he’d joined the Royal Navy. Over the next five years he moved from ordinary seaman Golding to Lieutenant, and the experience of war, and the deaths he witnessed, never left him. Through this time he came to an understanding of what he referred to as the ‘viciousness’ and ‘cruelty’ not so much of the Nazis as of his own youth. He wrote, ‘I have always understood the Nazis because I am of that sort by nature’, adding that it was ‘partly out of that sad self-knowledge’ that he wrote *Lord of the Flies*.

After the war he returned to Bishop Wordsworth’s, teaching there until 1961. He was married, to Ann, and they had two children, David and Judy. Like good parents William and Ann read to their children, and amongst the books was, yes, *Coral Island*. One winter’s evening, having settled the children, he had a brainwave: ‘Wouldn’t it be a good idea if I wrote a book about children on an island, children who behave in the way children really would behave?’ Two pictures presented themselves to his imagination: a small boy, standing on his head, delighted to be on a real coral island; and then the same boy being hunted down by other children who, in the absence of adults, have started to run amok.

*Lord of the Flies* shows how the first picture is replaced by the second, as a group of boys are the only survivors of an air crash. Would the story work if it was a group of girls? Your answer will depend on your views on gender and sexual difference. For someone who works in a cathedral, it's sobering that there are a group of choristers on the 'plane, and they and their leader Jack are the quickest to descend into savagery!

Golding's genius lies in the creation of a novel that is both a fable, full of symbolism, and yet also convincingly realistic. This is a real island populated by real boys, and yet there are also larger truths to be discerned. Take, for example, the character of Piggy. Piggy is fat, clumsy, short-sighted and his speech is ungrammatical. He is also the voice of reason, such as when he tries to persuade the other boys that the beast they fear stalks the island, is imaginary. 'How could there be? What would a beast eat?' he argues, to which the boys derisively reply, 'Pig', 'We eat pig', 'Piggy'. And Piggy is indeed killed by the other boys, pushed off a cliff on to a rock below. 'Piggy's arms and legs twitched a bit, like a pig's after it's been killed.' And so the voice of reason is destroyed.

I could go in this vein. Ralph represents order, leadership, and civilization. Jack represents savagery and the desire for power. Simon represents natural human goodness. And yet all three are convincingly drawn characters, not cardboard cyphers for underlying ideas. To remind you of what happens to them; Simon - like Piggy - is murdered; Ralph ultimately loses all his followers, and is on the point of being hunted down by Jack, when in the novel's final scene, naval personnel land on the island and rescue the boys. 'Jolly good show. Like the *Coral Island*' says a naval officer ignorant of all that has happened. And so the whole worldview underlying R.M. Ballantyne's book is explicitly rejected.

While it is always difficult to 'read off' an author's viewpoint from his work, it seems clear enough in this case that Golding has no truck with the notion of the innocence of children. There is, we are shown, a capacity for evil in every human heart. And for him this is no theoretical view, but one born of self-knowledge, experience of war, and of teaching. When Golding's editor Charles Monteith met him for the first time and learnt he was a teacher, he saw at once (to quote from John Carey's definitive biography) 'that only a schoolmaster could know, so intimately, how awful boys could be.'

In philosophical terms, Golding is here backing the tough view of humanity expressed in Thomas Hobbes' *Leviathan*, rather than the more romantic notion of the 'noble savage'. The idea of the noble savage, often erroneously attributed to Jean-Jacques Rousseau, is that human beings are naturally good, but corrupted by

the competitiveness and self-consciousness of civilisation. The phrase first appears in John Dryden's play of 1672, *The Conquest of Granada*:

*I am as free as nature first made man,  
Ere the base laws of servitude began,  
When wild in woods the noble savage ran.*

In 1651, by contrast, Thomas Hobbes had published his great work *Leviathan*, which argued that it's the role of the state to protect human beings from the most destructive aspects of their own nature. Otherwise they will inevitably fall into conflict, fighting over the finite resources in their environment. The 'base laws' of civilisation, are not about 'servitude', as Dryden would have it, but are to stop us tearing ourselves to pieces.

As I say, Golding is clearly with Hobbes. This is apparent not only from *Lord of the Flies*, but also Golding's second novel *The Inheritors*. *The Inheritors* is a remarkable piece of work, set in the Stone Age, and mainly told from the perspective of a small group of primitive humans. Or at least we assume they're human, even though they don't hunt, and their primitive speech is always accompanied by gesture and dance. Into their territory come a rather different group, with complex speech, spears, bows and dugouts. The reader comes to realize that the gentle, environmentally friendly ones, are Neanderthals. The ferociously competitive ones, on the other hand, are our ancestors, *homo sapiens*.

To cut a long story short, *homo sapiens* wipes out his rivals, and in the final chapter the perspective shifts to those who are going to inherit the earth; that is, us. There is a tension in *The Inheritors* between mourning the destruction of innocence, and being impressed by the 'higher level of energy' that the new people possess. Their evolutionary life force combines both violence and creativity. But the reader is denied the comforting view that in the battle for the 'survival of the fittest' the winner is morally superior to the loser.

'Survival of the fittest' by the way, is a phrase coined not by Charles Darwin but by the English philosopher and economist Herbert Spencer. Spencer came up with the phrase in 1864 after reading Darwin, and seeing similarities between his own economic theories and Darwin's biological ones: 'This survival of the fittest,' Spencer wrote, 'which I have here sought to express in mechanical terms, is that which Mr. Darwin has called 'natural selection', or the preservation of favoured races in the struggle for life.'

And so I have moved, seamlessly I hope, from literature to science, and to tackling yet another huge subject, the theory of evolution and what it has to say about

human nature. One hundred and fifty one years after the publication of Darwin's *The Origin of the Species* (1859) this can still be a controversial subject. One writer suggests this is because evolution is both so personal, and so accessible, unlike many scientific theories.

As I understand it, the key idea that Darwin proposed was that noted by Spencer: natural selection. Through the notion of natural selection, he showed the processes whereby organisms, living things, change in response to their environment. Because animals tend to reproduce in greater numbers than their environment can sustain, not all their offspring will survive. Those that live, will do so because they're best adapted for the conditions in which they find themselves: hence that phrase 'survival of the fittest', which Darwin started to use himself from the fifth edition of *The Origin of the Species* onwards.

Darwin was certain that his theory of natural selection was correct, but it wasn't proveable in the way Isaac Newton could demonstrate the existence of gravity. The changes in organisms took place over millions of years, and because living things are complex systems there is no neat equation to capture this. In the words of one writer, Darwin could offer neither 'the clean precision of Newton nor the reassuring comfort of Genesis'. He reconciled himself to the need for 'one long argument' of the kind that he'd begun in *The Origin of the Species*, which is full not of formulae but of examples – including lilies, barnacles, pigeons and bees. The one species he did leave out, aware of the huge potential for controversy, was human beings; just once making the suggestion that the same principles could be true for humans also. Perhaps this helped the positive response his book received from many theologians; the division of opinion in 1859 and subsequently was not straightforwardly along religious lines.

In Darwin's private correspondence he was not so reticent: 'Man in his arrogance thinks himself a great work worthy of the interposition of a deity, more humble and I think truer to consider him created from animals.' More than twenty years later, in 1871, he published *The Descent of Man*. Here he applied evolutionary theory to human evolution. His emphasis is on seeking to show that each of the human faculties considered to distinguish us from animals—such as moral reasoning, sympathy for others, beauty, and music—can be seen to some extent in other animal species (usually apes and dogs). It was following the publication of this book that the famous image of Darwin with a human face but a hairy monkey's body first appeared. The even more famous illustration 'March of Progress', showing a sequence of primates walking from left to right, gradually becoming taller and more upright, from the knuckle walking ape on the left to modern man on

the right, is only forty years old.<sup>1</sup> It has since been endlessly copied and parodied, with one version adding an extra male, shorter, much fatter, carrying a large fizzy drink from MacDonalds. There's progress for you.

This aspect of Darwin's thought, that there is little to distinguish us from animals, is arguable the most challenging aspect of all. The political philosopher John Gray, recently retired from the London School of Economics, argues that modern Darwinians such as Richard Dawkins have still not come to terms with this. In 2002 Gray published *Straw Dogs – thoughts on humans and other animals*, setting out a world view in which humans are not central, and the belief in progress is an illusion. One reviewer said, '*Straw Dogs* enraged and engaged me more than any other book this year.' It seems that Gray is setting out to put right almost everybody, saying first that Christianity is to blame for the cardinal error that human beings are radically different from other animals, an error now repeated in contemporary humanists and Darwinians, even when they reject religion.

Let me give you a brief flavour of Gray's style before moving on, although this won't be the last we hear of him in these lectures:

Page 15: 'Technical progress leaves only one problem unsolved: the frailty of human nature. Unfortunately that problem is insoluble.'

Page 116: 'If humans differ from other animals, it is partly in the conflicts of their instincts. They crave security, but are easily bored; they are peace-loving animals, but they have an itch for violence; they are drawn to thinking; but at the same time they hate and fear the unsettlement thinking brings. There is no way of life in which all these needs can be satisfied. Luckily, as the history of philosophy testifies, human beings have a gift for self-deception, and thrive in ignorance of their natures.'

Whether or not you agree with Gray and Darwin on 'humans and other animals' it is certainly true that Darwin didn't know about genes and genetics, an understanding of which shapes the way evolution is understood today. So, for example, natural selection is now explained in terms of hereditary material, in the form of genes, that organisms receive from their parents. The variations among offspring are a consequence of either the random introduction of new genes via mutations, or a reshuffling of existing genes during sexual reproduction.

I need to say a little more about genes, not least because I'm shortly going to turn to the 'gene-centred' view of evolution held by the pre-eminent Darwinian populariser in our day, Richard Dawkins, who is Charles Simonyi Professor for the

---

<sup>1</sup> It was drawn by Rudy Zallinger for the Time-Life Book *Early Man* (1970).

Public Understanding of Science at Oxford. So here goes: A gene is a unit of heredity, usually a length of DNA. Genes hold the information to build and maintain an organism's cells, and pass genetic traits to offspring. In human beings, genes are stored in 46 chromosomes. Each chromosome has between 400 and over 3000 genes, and the whole lot together is referred to as the human genome. If we were to think of each chromosome as a book in a library, they would contain up to 250 million letters each, making six billion in all. A full copy of the whole library is contained in almost every cell in our body. And in the year 2003, the Human Genome Project, led by Francis Collins, announced it had mapped out the entire sequence of DNA: what Collins has called 'the human instruction book'.

So, we move on to Richard Dawkins' 'genes-eye' view of evolution. In 1976 Dawkins published his first book, *The Selfish Gene*. It is considered a modern classic, honoured four years ago with a 30<sup>th</sup> anniversary edition. If you sit down to actually read it, as I've done in preparation for this lecture, you'll see it's not a straightforward setting out of the theory of evolution for today. While it is an attempt to make scientific thinking accessible to the general public, it's also a contribution to a scientific debate, claiming to show how other Darwin popularisers have got it wrong.

Intriguingly, Dawkins also wants to explore the consequences of evolutionary theory for a particular issue: selfishness and altruism. And there, within the first few pages, is the kind of clear statement I was hoping for: '...if you wish, as I do,' Dawkins writes, 'to build a society in which individuals co-operate generously and unselfishly towards a common good, you can expect little help from biological nature. Let us try to teach generosity and altruism, because we are born selfish. Let us understand what our selfish genes are up to, because we may then at least have the chance to upset their designs, something that no other species has ever aspired to.'<sup>2</sup>

Thirty years on, however, it appears that Dawkins no longer wants to put the matter quite like this. He has expressed regret for that phrase, 'born selfish' and wondered if *The Immortal Gene* might have been a better title, less open to misunderstanding. Exploring the reasons for his change of heart are a good way into exploring the arguments of his book.

Dawkins explains the emphasis in his title should fall on the word 'gene', not on the word 'selfish'. Part of the Darwinian legacy has been a debate about the *level* at which natural selection occurs. Does natural selection work at the level of whole species? No, because if it did, individual organisms would behave

---

<sup>2</sup> Richard Dawkins (2006) *The Selfish Gene* Oxford University Press p3

altruistically for the benefit of all; say by restraining their hunting behaviour to conserve the stocks of prey for the overall benefit of their species. But there is no such thing as a 'selfish species' argues Dawkins, acting in concert for their own benefit.

If most of us were asked, what is the basic unit of life, we would probably answer – the individual creature. A flock of geese is made up of individual geese. The audience for this lecture is a collection of individual human beings. This 'common-sense' view of the world is what Dawkins seeks to turn on its head. The basis unit of life, he argues, is not the goose or the human being, but the gene. This is the level at which natural selection really works, as the genes that are most effective at replicating themselves survive and get passed on. Genes operate according to their own implicit interests (to continue being replicated), not necessarily those of the living creature, the vehicle, that carries them. But usually the best way for genes to replicate themselves is by having a beneficial effect on their carrier. We human beings, says Dawkins, are 'survival machines – robot vehicles blindly programmed to preserve the selfish molecules known as genes.' We are temporary vehicles for the genes that either succeed or fail to spread into the next generation.

So are we selfish, or aren't we? Dawkins book has been taken to mean that human beings are intrinsically selfish, but he now says that's not quite what he means. It's our genes that are selfish, not us. Well, if Dawkins' argument is accepted, and it is the case that genes determine individuals, what does this actually teach us about those individuals? What, to go back to A.S. Byatt, have we learnt about human nature that we didn't know before?

At one level, the genetic level, quite a lot. But we were to ask of Dawkin's work, If we want to build a better society, what should we take into account about human nature? the answer is far from clear. He does say a number of times that people are the first species to be able to rise above their genetic inheritance, although he never really explains this. He also says that if want a society characterised by generosity and altruism, we will have to teach these things. This, arguably, is a rather naïve view, as an experienced teacher such as William Golding can readily testify.

But perhaps I am being unfair to Dawkins. After all, he is a zoologist writing about evolution, the majority of his examples are drawn from the animal kingdom, and has not as yet written a book specifically about human beings. So in a moment I am going to turn to an evolutionary psychologist who has, Steven Pinker. But before I do, I must touch on the one chapter in *The Selfish Gene* that deals with human culture.

In the most speculative section of his book, Dawkins argues that just as there is *genetic* evolution, so is their *cultural* evolution. He uses the author of the *Canterbury Tales* as an example. Geoffrey Chaucer died only 610 years ago; a blink of an eye in evolutionary terms. Nonetheless, if he could visit 2010 in a time machine, we would not be able to understand him. His English would be as a foreign language to us. But Chaucer is only separated from us by twenty generations, each of which understood its predecessor without any difficulty. It seems the English language has evolved by non-genetic means, at a much faster rate than genetic evolution.

To explain this, Dawkins comes up with the idea of the ‘meme’. If a gene is the carrier of genetic information, a *meme* is a similar carrier of cultural information. Just as you have units of genetic information being passed on, so here you have units of cultural information being passed on. The process by which this occurs is imitation, as a good idea, a striking melody, a fashion in clothing, are passed from person to person. The better the idea, the more successful it is in replicating itself.

For Dawkins, the idea of God is a ‘meme’, and so something that operates at a cultural rather than a genetic level. Not all biologists agree with this, and it’s issue I’ll briefly return to.

But for now I turn to the work of Steven Pinker, who is Professor of Psychology at Harvard in the United States. He is another highly successful populariser, and for the purposes of this evening I’m going to refer his modern classic *The Blank Slate – the modern denial of human nature*, first published in 2002:

Pinker’s work is noteworthy for a number of reasons, not least because he faces head-on the controversies that surround all theories of human nature. There is a relationship between ideology and theory we cannot afford to ignore. Remember Herbert Spencer finding a link between economic theories and Darwin’s biology? There are those who’ve argued that capitalism is rightly a ‘survival of the fittest’, and that eugenics, the principle of breeding out ‘inferior’ characteristics in animals, should be applied to humans. Such misuses of Darwin, touch on contemporary concerns. If, for example, the differences between men and women are genetically rooted, then might that imply we should not expect gender equality in society? The idea that heredity and genes help to shape who we are, might lead us to endorse racism, sexism, war, greed, and genocide as simply built into the way things are. Safer perhaps, to say we are products of our culture and upbringing, and heredity has nothing to with it.

There is an old debate about nature vs nurture, and which is the more important.

You might think the answer is obvious – it’s an interaction between the two. But for many today, accepting any role at all for ‘nature’, that is heredity and genetics, is ideologically and politically loaded.

Pinker, for what it’s worth, is politically liberal. But he’s convinced that the widely accepted idea of human beings as a ‘blank slate’, in which human beings are seen as entirely a product of their culture and experience, is wrong. He also rejects the idea of the ‘noble savage’ already seen off by Hobbes and Golding.

Instead, Pinker argues, human beings have an inherited universal structure shaped by the demands of surviving over the millennia, albeit with plenty of room for cultural and individual variation. He sees human behaviour as substantially shaped by evolutionary psychological adaptations. This means that some human tendencies such as favouring family over others, defense mechanisms, and (more disturbingly) violence, are universal. Human traits such as intelligence, conscientiousness and even anti-social behaviour are partly inherited.

In order to further our understanding of what Pinker is saying about human nature, I want to set out what he describes as the ‘three laws of behavioural genetics’.<sup>3</sup> This he does with particular reference to the rearing of children.

Law one: *All human behavioural traits are heritable.* The classic research here relates to twins, including twins separated at birth, which clearly shows that strong similarities in intelligence and personality cannot be explained by environmental factors alone. To take the controversial issue of intelligence, Pinker argues the overwhelming evidence is that while upbringing, opportunity and education come into it, one’s genetic inheritance is just as significant.

Let’s take another example, to show not only what this first law of behavioural genetics reveals, but also its limitations. Are such traits as ambition, assertiveness and success inherited? It’s hard to say, as there are many reasons for ‘success’. Research tells us, apparently, that tall people tend to be promoted more frequently than their shorter counterparts. And as height certainly is heritable, we need to take this and other factors into account when thinking about success. The moral, says Pinker, is that ‘heritability always has to be interpreted in the light of all the evidence; it does not wear its meaning on its sleeve.’ Crucially, taking heritability into account is *not* the same as determinism. We aren’t *determined* by our genes, says Pinker, but we are *affected* by them. *Some* of what we are is inherited, but by no means *all*.

---

<sup>3</sup> Steven Pinker (2002) *The Blank Slate – the modern denial of human nature* London: Penguin p 372

The second law goes like this: *The effect of being raised in the same family is smaller than the effect of the genes.* This is a surprising one, to me anyway, as I'll explain. Children growing up in the same family have plenty of shared experience with their siblings – the same parents, home and neighbourhood. They also have much that is *unique* to them: being the eldest or youngest, accidents or sickness, possibly parental favouritism, etc. So what has the most influence on children – what they share with their siblings, or what is unique to them? The conclusion of a vast amount of research is clear – we are shaped far, far more by our unique experiences, than those we share. This leads into the third law, *Much of human variation cannot be explained either by genes or families.* If we try to assess the different effects of genes, shared environment and unique experience, it comes out something like this: genes – 40-50%; shared environment – 0-10%; unique experience – 50%. Perhaps it is not so surprising, then, that children from the same family are often so different from one another.

This should take the pressure off parents. If children are 'noble savages', or 'blank slates', then upbringing is absolutely key to their flourishing. The logic of the 'blank slate' approach is that parents are *totally responsible* both for the successes and failures of their children. Fine to be credited with your children's highly successful careers, but what about being entirely to blame for their failures and problems? But in fact parents can take neither all the credit, nor all the blame, although some of both can fairly be laid at their door.

Pinker is not, of course, saying it doesn't matter how parents treat their children. Clearly it does, and parents have huge power and influence over their offspring and their happiness. But parents cannot shape their children into whoever they want them to be. The point is rather to build good relationships with them. Children, concludes Pinker, are not 'blank slates... they are people.'

Pinker ends his book with a quote I rather like, and that I suspect Augustine would have liked too. He refers to 'the voice of the species... that infuriating, endearing, mysterious, predictable, and eternally fascinating thing we call human nature.'

And so my whistle-stop tour of case studies from literature and science and philosophy is done, following on from my account of Platonic and Christian perspectives last week. It may have left you confused, enlightened or reassured. But is their mutual illumination here, or only contradiction? If I have understood Dawkins correctly, that for him the idea of God operates at a cultural rather than a genetic level – the level of the 'meme' rather than the 'gene' – then this sounds like a contradiction. The religious view, is that the capacity for relationship with God is built into the very substance of who we are.

But for the most part, however, I see much potential for mutually enriching and illuminating dialogue, and even that the Christian perspective on human nature might find a measure of scientific support. Augustine may not have known about genes, but he sensed better than Pelagius that the roots of human love and hate run deep within us. And all those centuries ago, Augustine wrote a commentary on the book of Genesis saying that where biblical texts contradict what we know from science and our God-given reason, they should be considered metaphorical. In this tradition, I am prepared to consider Dawkin's theory of 'memes' as long as he is happy for me to take this as a model, and not require me to believe in their literal existence. I would like him to do me the same favour with regard to the garden of Eden.

I was struck by the foreword to an earlier edition of *The Selfish Gene*, where Robert L. Trivers of Harvard talks about the possible evolutionary function of self-deception. The best way for an organism, faced with a rival, is to give the impression of assurance; and the appearance of assurance is best achieved by concealing even from yourself any self-doubt. Self-deception, soberingly, is a theme found almost everywhere I've turned, as is the human capacity for destruction.

Next week will be not another whistlestop tour, but rather a case study precisely of human destructiveness and violence, seeking to bring to bear a number of perspectives on that single issue. The intention is not to be depressing, but to be realistic; and to prepare the ground for my final lecture dealing with hope, and the possibility of change and progress that faces, rather than shies away from, the darker side of the human condition.

So thank you for staying with thus far, and hoping to see you again! I'm truly grateful for your attendance and your attention.