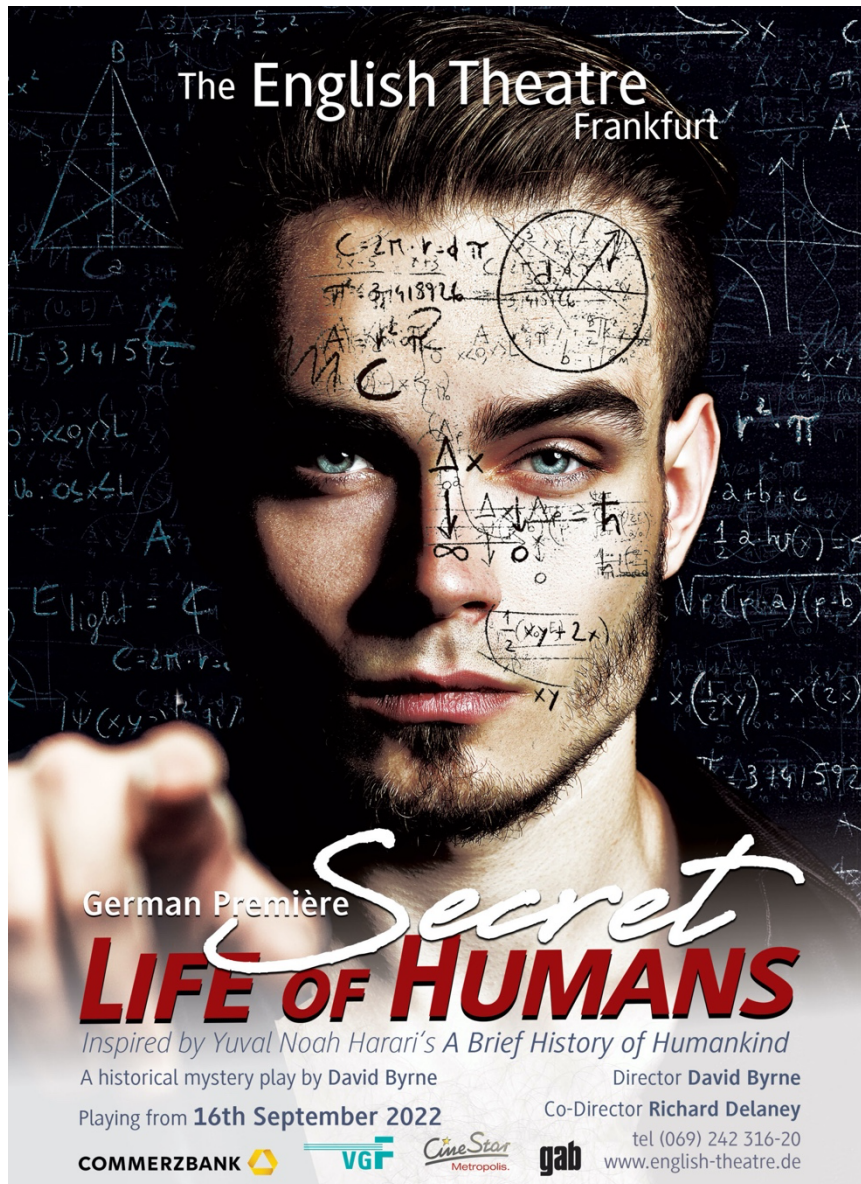


Secret Life of Humans

A historical mystery play by David Byrne – Inspired by Yuval Noah Harari's *A Brief History of Humankind*

16th September 2022– 19th October 2022



The English Theatre Frankfurt Teachers' Resource Pack

This teachers' pack includes information as well as tasks and topics to be dealt with in the classroom. The tasks do not necessarily build on each other. Cut and paste as you please, and please consult the official program for additional information.

Background Information to *Secret Life of Humans*



The author and director – David Byrne

David is the founding Artistic and Executive Director of one of London's most vibrant new writing theatres, the New Diorama Theatre (NDT) which won The Stage Award for Fringe Theatre of the Year, 2022.

His latest play THE INCIDENT ROOM, about the Yorkshire Ripper case, was co-written with Olivia Hirst and first performed at the Edinburgh Festival Fringe in 2019, transferring to the New Diorama in February 2020, ahead of an Off-Broadway run. Screen rights were picked up by Babycow

Productions; David and Oliva are writing a 3 x 60' tv adaptation.

His previous productions, SECRET LIFE OF HUMANS and a new, radical adaptation of George Orwell's DOWN AND OUT IN PARIS AND LONDON both played to sold out audiences at the Edinburgh Festival and in London, receiving four and five star reviews in the national press, with both transferring Off-Broadway. SECRET LIFE OF HUMANS has been published by Nick Hern Books.

Secret Life of Humans - Synopsis

In the play „Secret life of Humans“, David Byrne portrays the story of a historical figure and how his dark past follows his descendants presently.

The play begins with Ava a university professor, addressing the audience in a lecture while introducing them to the storyline. She shares her experiences from the past weeks, starting with a date she went on with Jamie, whom she met through a dating app.

While she is not very interested in him at first, this changed when she learns that Jamie is Bruno Bronowski's grandson. After various flashbacks to Jamie's grandfather giving interviews and him and his later wife getting to know each other, they find their way back to Jamie's house. Here, it becomes clear that Bruno had a locked room where nobody ever entered, which Ava and Jamie decide to explore. Soon, they piece the information within various letters together, and discover that Jamie's grandfather was involved in the so called „Manhattan Project“, an initiative to build bombs that were to achieve the highest possible mortality rate. In further flashbacks we learn that Bruno and his partner George succeeded at producing optimal mathematical equations, and thousands of German civilians died as a result. Bruno moved on to build nuclear weapons in Japan.

Jamie is shocked and disappointed in the ancestor he was once proud to be related to. Meanwhile, Ava has always disagreed with Bruno's statement of infinitely progressing humanity and reveals that she has lost her job at her previous university and needs a story worth publishing to save her career.

The play concludes with one final flashback to Bruno's wife Rita talking to him before an interview while Ava talks to her students, as they both tell a story of the last ever human to walk the earth.

The Characters

Ava

Ava is a university professor in her early 30s. She has just been given her final notice and tells the story of her recent findings in her last lecture. She tells the students about her date with Jamie Bronowski and about what she found out about Bruno Bronowski on that date.

Following Yuval Noah Harari's ideas, Ava takes the position that humanity is by no means only making progress. Instead, she argues that the world was a better place when Homo Sapiens was a nomadic people.

Jamie Bronowski

Jamie is in his late 20s/early30s and Bruno Bronowski's grandson. He has never met his grandfather but has seen all the episodes of his TV show *The Ascent of Man*. He is on a blind date with Ava looking for a relationship.

Bruno Bronowski

Based on the historical figure Jacob Bronowski, whose nickname was Bruno, this character is portrayed in his late 30s as well as in his mid 60s. We learn about Bruno's life in flashbacks. At the beginning of his career Bruno is a scientist struggling for acknowledgement. During World War II he was involved in a secret research project for the allies, developing a bomb in order to fight the Germans. Later he got his own TV series, a BBC television documentary about the history of human life and scientific endeavour: *The Ascent of Man*. As the title suggests, Bronowski assumes that the human species is making steady progress in its development.

Bruno is/was married to Rita.

Rita Bronowski

Rita is Bruno's devoted wife. They have met in an art class where Bruno modelled for her.

George

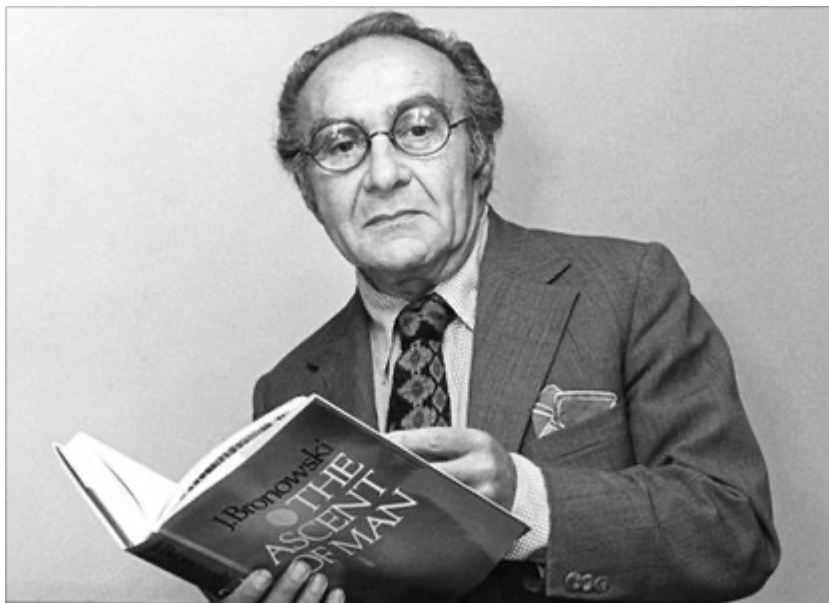
George wins Bruno for a secret government project. Together they work on engineering fire raising bombs in order to fight the Germans in World War II which eventually result in the bombing of Dresden. When George loses his partner Martyn in a bombing, he realizes that he caused the exact same pain he feels thousands of times in engineering these bombs.

Jacob (Bruno) Bronowski (The historical figure)

Jacob Bronowski (18 January 1908 – 22 August 1974) was a Polish-British mathematician and philosopher born to Jewish parents in Poland.

He was known to friends and professional colleagues alike by the nickname Bruno. He is best known for developing a humanistic approach to science, and as the presenter and writer of the thirteen-part 1973 BBC television documentary series, and accompanying book, *The Ascent of Man*, which led to his regard as "one of the world's most celebrated intellectuals".

Bronowski's family moved from Congress Poland to Germany and then to England while he was a child. He won a scholarship to study mathematics at the University of Cambridge. His interests have been described as ranging "widely, from biology to poetry and from chess to Humanism". He taught mathematics at the University College Hull between 1934 and 1942. During World War II he led the field of operations research and worked to increase the effectiveness of Allied bombing. After the war he headed the projects division of UNESCO. Bronowski wrote poetry and had a deep affinity with William Blake. From 1950 to 1963 he worked for the National Coal Board in the UK. From 1963 he was a resident fellow of the Salk Institute for Biological Studies in San Diego, until his death in 1974 in East Hampton, New York, just a year after the airing of his *Ascent of Man*.



Jacob Bronowski ¹

¹Bildquelle: http://news.bbc.co.uk/today/hi/today/newsid_9444000/9444270.stm
(Stand: 12.09.22)

Bronowski and the Bombing of Dresden and the Manhattan Project

In *Secret Life of Humans*, Jamie finds out that his grandfather played an important part in the maximization of the effect of fire-raising bombs that eventually were used for **the bombing of Dresden and Hiroshima and Nagasaki**.

On 13 February 1945, British aircraft launched an attack on the eastern German city of **Dresden**. In the days that followed, they and their US allies would drop **nearly 4,000 tons of bombs** in the assault.

The ensuing firestorm **killed 25,000 people**, ravaging the city centre, sucking the oxygen from the air and suffocating people trying to escape the flames. [...]

But the bombing has become **one of the most controversial Allied acts** of World War Two. Some have questioned the military value of Dresden. Even British Prime Minister Winston Churchill expressed doubts immediately after the attack. "It seems to me that the moment has come when the question of bombing of German cities simply for the sake of increasing the terror, though under other pretexts, should be reviewed," he wrote in a memo.

"The destruction of Dresden remains a serious query against the conduct of Allied bombing."

By February 1945, Dresden was only about 250km (155 miles) from the Eastern Front, where Nazi Germany was defending against the advancing armies of the Soviet Union in the final months of the war.

The city was a major industrial and transportation hub. Scores of factories provided munitions, aircraft parts and other supplies for the Nazi war effort. Troops, tanks and artillery travelled through Dresden by train and by road. Hundreds of thousands of German refugees fleeing the fighting had also arrived in the city.

At the time, the UK's Royal Air Force (RAF) said it was the largest German city yet to be bombed. Air chiefs decided an attack on Dresden could help their Soviet allies - by stopping Nazi troop movements but also by disrupting the German evacuations from the east.

RAF bomber raids on German cities had increased in size and power after more than five years of war. **Planes carried a mix of high explosive and incendiary bombs: the explosives would blast buildings apart, while the incendiaries would set the remains on fire, causing further destruction.**

The attack on Dresden began on 13 February 1945. Close to 800 RAF aircraft - led by pathfinders, who dropped flares marking out the bombing area centred on the Ostragehege sports stadium - flew to Dresden that night. In the space of just **25 minutes**, British planes dropped more than **1,800 tons of bombs**.

As was common practice during the war, US aircraft followed up the attack with day-time raids. More than 520 USAAF bombers flew to Dresden over two days, aiming for the city's railway marshalling yards but in reality hitting a large area across the city.

On the ground, civilians cowered under the onslaught. Many had fled to shelters after air raid sirens warned of the incoming bombers.

But the first wave of aircraft knocked out the electricity. Some came out of hiding just as the second wave arrived above the city. People fell dead as they ran from the flames, the air sucked from their lungs by the fire storm. In the UK, Dresden was known as a tourist destination, and some MPs and public figures questioned the value of the attack. A story at the time published by

the Associated Press news agency said the Allies were conducting terror bombing, spreading further alarm.

US and UK military planners, however, insisted the attack was strategically justified, in the same way as attacks on other cities - by disrupting industry, destroying workers' homes and crippling transport in Germany. [...]

The debate about the Allied bombing campaign, and about the attack on Dresden, continues to this day. Historians question if destruction of German cities hindered the Nazi war effort, or simply caused civilian deaths - especially towards the end of the conflict. Unlike an invasion like D-Day, it is harder to quantify how much these attacks helped win the war.²

Right at the end of the Second World War, Bruno was assigned to a new project, the **Manhattan Project**, which was also criticised for having brought unwarranted suffering beyond measure and for having brought about a catastrophic turning point in warfare. While the war in Europe had come to an end, the USA was still at war with Japan.

The **Manhattan Project** was a research and development undertaking during World War II that produced the first nuclear weapons. It was led by the United States with the support of the United Kingdom and Canada from 1942 to 1946. Little Boy and Fat Man bombs were used in the atomic bombings of Hiroshima (06.08.1945) and Nagasaki (09.08.1945), respectively, with Manhattan Project personnel serving as bomb assembly technicians and weaponeers on the attack aircraft.

In **Hiroshima** out of a population of 343,000 inhabitants, some **70,000 people were killed** instantly, and **by the end of the year the death toll had surpassed 100,000**. Two-thirds of the city area was destroyed. "Nuclear shadows" were all that remained of people who had been subjected to the intense thermal radiation. An estimated 40,000 people were killed instantly in

Nagasaki, and at least **30,000 more would succumb to their injuries** and radiation poisoning by the end of the year. An exact accounting of the death toll would prove impossible, as many records were destroyed by the bomb. About 40 percent of the city's buildings were completely destroyed or severely damaged.³



Bombing of Nagasaki⁴

² <https://www.bbc.com/news/world-europe-51448486>

³ <https://www.britannica.com/event/atomic-bombings-of-Hiroshima-and-Nagasaki/The-bombing-of-Nagasaki>

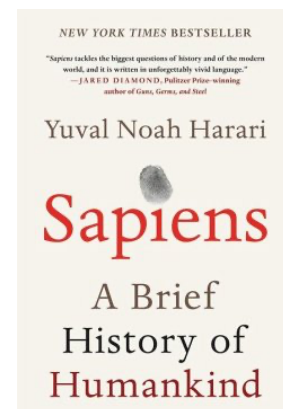
⁴ Bildquelle: <https://www.historynet.com/michie-hattori-eyewitness-to-the-nagasaki-atomic-bomb-blast> (Stand: 12.09.22)

Already in 1944 Bronowski “liaised with the Washington-based Joint Target Group (JTG)” in order to prepare attacks on Japan and analyze the results.⁵ In November 1945 he travelled to Japan to document the effects of the Hiroshima and Nagasaki bombings.

In spite of what he had created and what he had seen, Bronowski maintained a positive image of atomic power and science itself. According to him, science and scientists could never be responsible for unpleasant consequences, since humans and society could decide freely about the purpose of scientific findings which in itself were neither good nor bad. He also held on to his positive image of humanity, claiming that, no matter how much pain we create, we still are on a constant path of progress and increasing humanity in comparison to the past.

Yuval Noah Harari’s “History of Humankind” and Ava⁶

Harari's main argument is that *Sapiens* came to dominate the world because it is the only animal that can cooperate flexibly in large numbers. He argues that prehistoric Sapiens were a key cause of the extinction of other human species such as the Neanderthals and numerous other megafauna. He further argues that the ability of Sapiens to cooperate in large numbers arises from its unique capacity to believe in things existing purely in the imagination, such as gods, nations, money, and human rights. He argues that these beliefs give rise to discrimination – whether that be racial, sexual or political and it is potentially impossible to have a completely unbiased society.



Harari claims that all large-scale human cooperation systems – including religions, political structures, trade networks, and legal institutions – owe their emergence to Sapiens' distinctive cognitive capacity for fiction. Accordingly, Harari regards money as a system of mutual trust and sees political and economic systems as more or less identical with religions.

Harari's key claim regarding the Agricultural Revolution is that while it promoted population growth for Sapiens and co-evolving species like wheat and cows, it made the lives of most individuals (and animals) worse than they had been when Sapiens were mostly hunter-gatherers since their diet and daily lives became significantly less varied. Humans' violent treatment of other animals is a theme that runs throughout the book.

In discussing the unification of humankind, Harari argues that over its history, the trend for Sapiens has increasingly been towards political and economic interdependence. For centuries, the majority of humans lived in empires, and capitalist globalization is effectively producing one, global empire. Harari argues that money, empires, and universal religions are the principal drivers of this process.

Harari sees the Scientific Revolution as founded on innovation in European thought, whereby elites became willing to admit to, and hence to try to remedy, their ignorance. He sees this as one driver of early modern European imperialism and of the current convergence of human cultures.

⁵ Desmarais, Ralph: Jacob Bronowski: a humanist intellectual for an atomic age, 1946–1956, p. 586. The British Journal for the History of Science , Volume 45 , Issue 4: Special Issue: British Nuclear Culture , December 2012 , pp. 573 - 589

⁶ Bildquelle: https://www.buecher.de/shop/alternativ/sapiens/harari-yuval-noah/products_products/detail/prod_id/40545875 (Stand: 12.09.22)

Harari also emphasizes the lack of research into the history of happiness, positing that people today are not significantly happier than in past eras.^[5] He concludes by considering how modern technology may soon end the species as we know it, as it ushers in genetic engineering, immortality, and non-organic life. Humans have, in Harari's chosen metaphor, become gods: they can create species.⁷

Ava in *Secret Life of Humans* refers to Harari on several occasions. She portrays humans as god-like creatures, refers to the “invisible threads”, the shared myths we decided to believe in like the value of money or human rights, and claims that wheat farming is where it all went wrong. Consequently, she doubts Bronowski’s positive image of humankind on a way of constant progress. She also reacts in accordance with Harari’s image of Homo Sapiens, when she finds out about Bronowski’s past. Harari claimed in *A Brief History of Humankind* that Homo Sapiens has exterminated other human species directly or indirectly, in order not only to survive but to spread further around the world. Ava, who has been given her notice at the university she works for, sees to her survival first too and cannot afford remorse or sympathy with Jamie’s distress when she takes her findings about Jacob Bronowski with her to save her career. She says it herself: “Oh how we’ve progressed, but we’ve not changed.”⁸

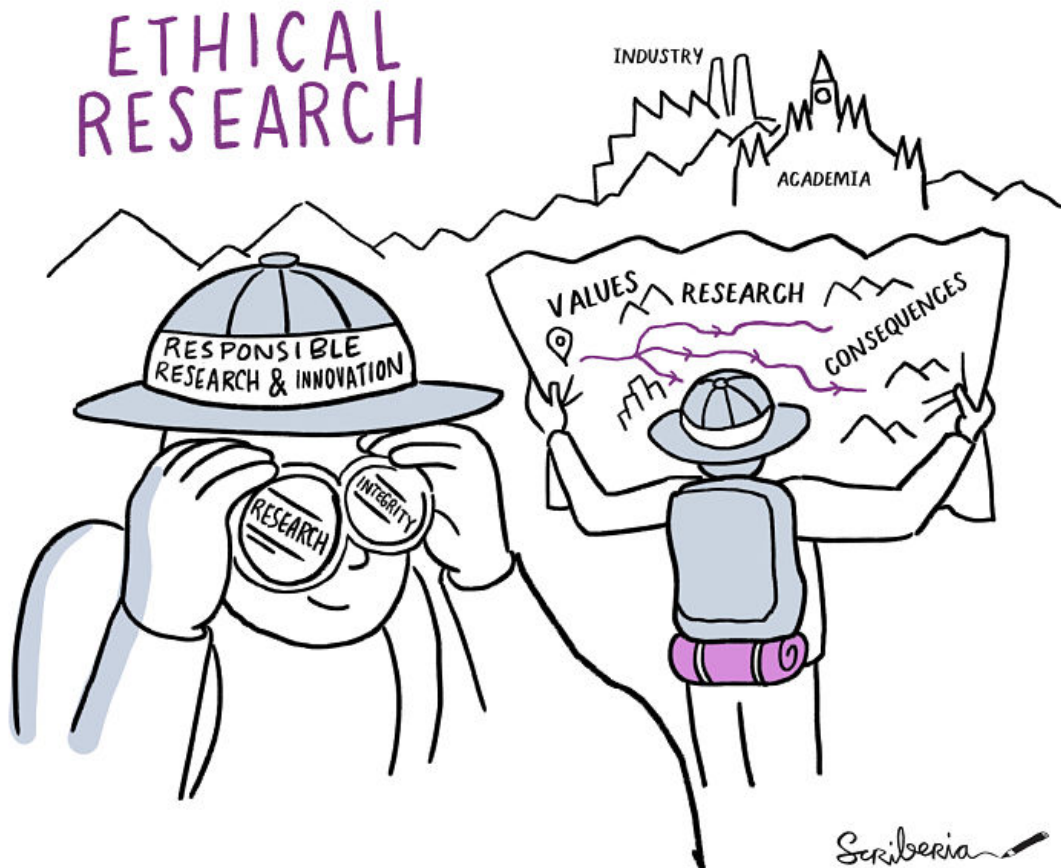
⁷ https://en.wikipedia.org/wiki/Sapiens:_A_Brief_History_of_Humankind

⁸ Byrne, David: *Secret Life of Humans*, Prologue.

Pre-Watching Activities

Science and its moral consequences

- 1) Look at the picture and describe it.⁹
- 2) Analyze the picture. Think about the role of industry, academia and the scientist. How do they relate to each other?
- 3) Think about and gather possible challenges for ethical research.



Alternatively:

- 1) Read the quote from the play. Sum up in your own words what it is about:

“Maths itself, science itself, cannot be good or evil. It is correct or incorrect, regardless of any later applications.”

- 2) Position line: Draw a line within your classroom and pick a side: From left “I do not agree” to right “I agree”. Give reasons for your choice.

Come back to the quote again after watching the play. See post-watching activities.

- 3) Think about and gather negative and positive consequences of scientific success in human history. *For students who need more help, you could hand out the collage in the appendix.*

⁹ <https://www.socialsciencespace.com/2021/06/should-we-mandate-a-course-in-ethics-for-all-research-based-phd-candidates/>

Working with the script

In *Secret Life of Humans* different philosophies dealing with humanity are portrayed. Ava's character is based on Yuval Noah Harari's statements made in *Sapiens – A History of Humankind*, while Bronowski represents himself. Below there are excerpts of the play.

- 1) Choose either Ava's positions or Bruno's, get into groups of four and read the chosen excerpt. Sum up his/her main arguments.
- 2) Present your results to the other groups.
- 3) Compare and contrast Ava's and Bronowski's ideas.
- 4) Take a stand: Who do you agree with more and why?

AVA

[...]

We no longer see ourselves as animals. Even though we're covered in the pencil markings of our past. As Darwin said: our bodies each bear the indelible stamp of our lowly origins.

Here's a simple one - stretch out your arm and put your thumb on your little finger. Some of you will see a protruding tendon on your wrist. There's mine – it's quite pronounced. It's useless now. It's a tendon found in primates who use their fore arms for walking. Those distant ancestors, they're still here with us.

[...] These are vestigial traits. From the Latin 'vestigia', meaning 'footprints'.

In our minds we are these complex, rich, intellectual beings, full of nuance and philosophy, contradiction and politics, of science and art, of love and sadness. We have gone from animals, to believing we alone were created in the image of gods. And now, finally, to where we are today, all powerful gods ourselves. [...]

What I'm about to tell you [...] is about what makes us human. Of how we've progressed, but we've not changed. How our destiny as a species – in the same way a fruit holds a stone, it's future, at its core - has been inside each one of us from the very beginning. About how this, our body, our animal body, is still layered with the footprints of those primitive ancestors. It's still - weak, analogue, vulnerable and lonely.

Do you know why you're afraid of the dark? Why we're all afraid of the dark? Humans, we're ill prepared for the world around us. Our soft, vulnerable skin, unsophisticated sense of smell, our slow run, makes us easy prey. When night comes, the only way we used to survive was by gathering together, retreating to safety.

[...] Inside all of us, somewhere between our memory and our imagination, our bodies remember every detail of what that was like.

[...] It's easy to patronize our ancestors and their cave art. But here we are, tens of thousands of years later, sitting together in the dark, doing the exact same thing.

None of this is real. [...] But it's no less real than the value of the money in your pocket. Or the law's we decide to follow. Or the borders of countries we've drawn on maps. Or even human rights. All only real because we have decided to believe in them.

Look at words, for example. What are they really? In essence? They're just lines and circles and shapes. Nothing more. But once we're told what they mean, we'll see that imagined meaning for the rest of our lives. You can never go back to seeing them as just lines and shapes ever again.

We live amongst the threads of a million shared myths. They're unbreakable and our minds are so strong: they're the dreams we can never wake up from.

The most surprising thing about homosapiens is that we are alone. There are no other species of human. Once there were: five, maybe six, maybe more. What became of them? There are the mass graves of Neanderthals, the bones of men and children, buried all across the world. Violence, justified, unjustified, is our most pronounced vestigial trait. You see, it's almost certain that our great grandparents murdered every other variant of human species. Those invisible myths every culture have, they mean so much to us, it's worth risking our very existence to protect what is, really, just emptiness in the air.

This is where it all went wrong [...]. Wheat, farming. Before, we went where we wanted, when we wanted. But then we started farming wheat, we had to settle down, live permanently by the fields, completely changing our way of life -

We had food before. And more varied food! No. Fear. For the first time, fear about the future became a major player in the theatre of the human mind. What about the harvest next year? Or the year after that? We stopped living now. Wheat is why I'm terrified about losing my job, why your grandfather was so worried about whatever he was hiding in that room. It tied us down, and it made us afraid.

BRUNO

The journey of human history is that of a great escape. The escape from poverty, the escape from early death, the escape from famine. Look where we are now. Sitting here with the lights and cameras broadcasting us all over the world. All this, from living in trees. Thanks to the enlightenment, the industrial revolution, germ theory, I will live twice as long as my grandfathers. Our lives would be unrecognisable to them. And my life has been so happy.

Getting to regularly talk on television with all of you. Yes, I have suffered many private conflicts of loyalty, but I have never had any uncertainty about the meaning of the word "good", the word "true", the word "beautiful". I have an enormous pride in being a human being. And being alive in the twentieth century.

In the darkest caves, we find a record of what dominated the mind of early man. Why did we do this? Create markings and drawings in places so dark and hidden?

Here we see expressed for the very first time the power of the human imagination. In these paintings we made ourselves familiar with the deadly dangers we know we must face. When suddenly light flashes upon them – we see the bison as if it were charging at us, we see the running deer, the turning boar. In that moment our imaginations brought our greatest fears to life. And our spear arm flexed, preparing us for the emotions, the fear, the rush, we knew we must control to survive.

Here in the dark is where we first imagined our potential. Seeing, not with our eyes, but through the telescope of the imagination.

Even if we, as individuals, were to stand still, progress would still race all around us. Whether we're ready for it or not.

The Ascent of Man is always teetering in the balance. As we travel... as we journey from advancement to advancement.

Maths itself, science itself, cannot be good or evil. It is either correct or incorrect, regardless of any later applications.

Commenting on his visit to Hiroshima after in order to assess the damage done by the dropping of a nuclear bomb:

After the war, on a fine November day in 1945, I landed on an airstrip in Southern Japan, having been chosen as part of special task force. We had a week to research a commissioned report on how well the buildings had withstood the dropping of the nuclear bombs.

We drove off; night fell; the road rose and fell away, barren fields on all sides. Then, suddenly, I was aware that we were already at the centre of the damage.

The shadows behind me were not trees but the skeletons of the Mitsubishi factory buildings, pushed backwards and sideways as if by a giant hand of God.

But it was not God's hand. What I had thought to be broken rocks was a concrete power house with its roof punched in. I could now make out the outline of two crumpled gasometers; otherwise, there was nothing but cockeyed telegraph poles and loops of wire in a bare waste of ashes.

Elsewhere, the world was coming together again.

But how could anyone seeing this waste land comprehend why this had been done? It had been justified. But in hindsight seemed unjustifiable.

We need to forcibly forget what we've done, who we are, lock it away, and, instead, imagine who we could become. Otherwise, there's no hope for the future.

It's tempting and easy to close your eyes to history and speculate that everything undesirable – war, violence, greed - are primal animal instincts. Always with us.

As if, like a tiger, we still have to kill to survive. We don't.

When we look at the carvings of the early gods now, we are looking at ourselves. We are healers of the sick, the masters of nature, we're the ones who make terror and fire rain from the sky. With a lazy flick of a finger, we can now destroy every last human on the planet.

I was at Nagasaki, we filmed at Auschwitz for Ascent of Man. At the two mass graveyards of the twentieth century. Standing there, in the camp, above a small pool of water, where the ashes of tens of millions of people, my own family were flushed, I saw what we are capable of. It was not done by gas. Or by mathematics. No. It was done by dogma. By ignorance. When people think they have absolute knowledge, with no test in reality, this is how they behave. When we close our eyes and our ears, we stop being human. We become just regiments of ghosts. Everything I have done, the pursuit of science, of knowledge, has been a tribute to what we can know although we are fallible.

Yet we always come down ahead.

We have resisted it. We have come close to succumbing. The whole problem with the world is that fools and fanatics are always so sure, so certain. And wiser people, those who question, are so consumed by doubt. I wanted to be sure in my uncertainty. Confident that I knew nothing. That is how I, of all people, have hope.

Every man, every civilisation, has gone forward because of its engagement of what it has set out to do. The personal commitment of a person to their skill. The emotion, physical and intellectual, working as one has made the ascent of man.

Just look at them, that great escape - no more generations of men wiped out at war, you are now more likely to be harmed by excess than from starvation or famine. Even the poorest amongst you has medical care Queen Victoria herself would have envied.




How could anyone say we are not coming down ahead? And perhaps, if you continue working together, we might only just be getting started.

While Watching Activities

Comprehension Quiz

- 1) How do Ava and Jamie meet?
 - a) He is one of her students
 - b) On a tinder date
 - c) On a bus
 - d) They used to go to school together
- 2) Despite of a rather unsuccessful date, Ava is interested in Jamie. Why?
 - a) Because of what he tells her about his famous grandfather.
 - b) Because of his good looks.
 - c) Because she needs a place to stay after having lost her job.
 - d) Because she lives very far away and has missed her last bus home.
- 3) Ava wants to learn something about Jamie's grandfather, she did not know before. What does he tell her?
 - a) He tells her that his grandfather was secretly gay.
 - b) He tells her that his grandfather had 12 children.
 - c) He shows her poems his grandfather had written but never published.
 - d) He tells her about a secret room, his grandfather has kept locked.
- 4) Ava and Jamie go through the sealed boxes in the once locked room. What do they find that shocks Jamie?
 - a) Nazi memorabilia proving Bruno's secret admiration for the Nazi regime
 - b) Adoption papers proving that Jamie is not related to Bruno after all.
 - c) Love letters from another woman than his grandmother.
 - d) Papers that prove Bruno's contribution to the invention of bombs used for the bombing of Dresden and the bombing of Hiroshima.
- 5) Ava criticizes Bruno's work. Choose the sentence that describes her reasons best.
 - a) She accuses him of being responsible for many unnecessary civilian deaths and of misusing science for murder.
 - b) She accuses him of sloppy and superficial work.
 - c) She thinks he was blind to the faults of mankind and painted a too positive picture of his own species.
 - d) She believes that Bruno should have published his insight-knowledge about the governmental projects.
- 6) George is Bruno's colleague. What else do we learn about George?
 - a) George is secretly involved with his former roommate from college and is a spy for the Germans, leaking information about the bombs he and George try to engineer.
 - b) George lives with his former roommate from college but is in love with Bruno's wife.
 - c) George recruits Bruno but later dies in a bombing.

- d) George lives with his former roommate from college in a secret relationship. He loses him in a bombing.
- 7) George and Bruno worked together on their secret project. In hindsight, they deal very differently with what they've done.
- While Bruno starts a new secret project involving atomic bombs, George cannot shake the guilt arising from his contribution to taking civilian lives after having lost his own partner in a bombing.
 - While Bruno tries to forget, George kills himself
 - George gets married and starts a family while Bruno opens a fund for relatives of bomb victims.
 - George and Bruno fight about the ethical responsibilities of science and eventually agree to never work with or see each other again.
- 8) How do Ava and Jamie part?
- Ava and Jamie agree to meet again the next day to keep sorting through the files.
 - Ava is not interested in Jamie as a partner but promises to keep his family secrets safe.
 - Ava leaves, taking all their findings with her against Jamie's will in an attempt to save her career with a new paper or book about Bruno Bronowski.
 - Jamie leaves all the files to Ava hoping that he will learn more about his family history with the help of her research.
- 9) How many time periods does "Secret Life of Humans" span across?
- 4
 - 1
 - 3
 - 7
- 10) According to Ava and Bruno, the only thing we have learned from history is...
- ... that our ancestors keep living inside us.
 - ... that we do not learn from history.
 - ... that instinct is more influential than knowledge.
 - ... that science does not kill. Ignorance does.

a) 8-10 correct answers	4-9 correct answers	0-3 correct answers
 Congratulations! You understood a lot!	 Quite good already! Talk to your classmates again about the play, you might tap into new levels of understanding!	 Don't give up! Talk to your classmates about the parts of the play that are still a bit fuzzy to you.

Working with the script

Ava and Jamie spent the night together and now go through Jamie's grandfather's sealed documents.

- 1) Remember George. Gather what you remember about his character.
- 2) Read the excerpt.
- 3) Sum up what it is about
 - Look at George's situation again. Discuss the following questions and give reasons for your answers based on the script.
 - What happened to Martyn?
 - What kind of relationship does George have with Martyn?
 - Explain George's inner conflict. Why does George say "I killed him a thousand times. And every night, I kill him a thousand more"?

BRUNO puts on his jacket and leaves the office. **RITA** enters, still in her black dress, and sits between **AVA** and **JAMIE**.

AVA

Do you really think your grandmother – your family – never went through all this.

JAMIE

I don't know. What's that?

AVA

It's a newspaper clipping. A photograph of a young man, crying over his suitcase.

JAMIE

He looks like his whole world has ended. He's grieving isn't he?

AVA

He looks like he's lost everything.

JAMIE

I know how he feels. To be the last one left.

AVA

Who is he?

JAMIE

I don't know. I've never seen it before.

RITA

And suddenly I remember, who he reminded me of.

[...] His name, it was George. A boy who worked with my husband. One morning, he just arrived at the house. Shell shocked and covered in dust.

A large bomb goes off. GEORGE appears at the house, clearly shaken, his clothes covered in dust and dirt.

GEORGE

Hello? Bruno? Are you here?

BRUNO enters in from another room. Surprised to find **GEORGE** at his home.

BRUNO

George?

RITA, remembering these events, slowly brings herself to be a part of them again.

RITA

Please, come and sit down.

BRUNO

Let me get you a strong drink.

***BRUNO** exits. Silence.*

GEORGE

It's been eight hours.

[...] **GEORGE**

I'm still shaking. I was two streets away, walking home from work. And as soon as I heard it, I knew. It's all gone.

RITA

Eight hours? Where have you been?

GEORGE

Just there. Waiting.

RITA

Waiting for what?

GEORGE

Martyn. I live with a friend from Oxford called Martyn. I was waiting for him to come home. His shift pattern is always changing. So I didn't know whether he -
A long silence.

RITA

And did he come home? *Silence.* George. I'm so sorry.

***GEORGE** takes a small, well-worn photograph out of his pocket and hands it to **RITA**.*

GEORGE

This is him.

RITA

There he is. You managed to salvage this?

GEORGE

No, I always have that on me. And because of what we do –

RITA

What you do?

GEORGE

What Bruno and I are working on.

RITA

He's not told me. We've never talked about it.

GEORGE

You should know. [...]

GEORGE

At our final ball in Oxford, the weather was so hot, you could feel the sweat drip down your back. After years of pressure, to be free of all work and responsibility and drunk, was the best feeling in the world. It seemed to stay light forever, I walked back to my rooms in the early hours. At one in the morning the stone path was still hot. I was barefoot, I'd had my feet in the river. I smelt of sweat and tadpoles. I opened the window, threw off my shirt and felt the

smallest breeze against my skin. I went into the bathroom to get some cold water, my head swaying and there he was, standing by the basin.

A sudden silence.

RITA

George - ?

GEORGE

I just froze. I saw him tense, just for a second, sensing I was there. The hot air suddenly holding its breath. He turned to face me. He was exactly as I knew he would be. That's how I'll remember him. Totally unblemished. But these invisible threads, they just held me back. I realise now I have so many regrets.

RITA

You can't live a life full of regret, George.

GEORGE

I think I can. But I fear that I'm going to be alive for a very, very long time. I killed him, you see.

RITA

You can't blame yourself.

GEORGE

Can't. Can't. Can't. I killed him a thousand times. And every night, I kill him a thousand more.

Post-Watching Activity

Science and its moral consequences

1) *If you have started with the picture:*

Sum up your results from discussing the picture.

2) Which aspects of the picture did you rediscover in the play? (Think-Pair-Share)

3) Read the quote from the play in which Bruno justifies his contribution to the bombing of Dresden. Sum up in your own words what it is about.

“Maths itself, science itself, cannot be good or evil. It is correct or incorrect, regardless of any later applications.”

4) Discuss his thesis. Refer to the play and find further arguments for your point of view. (Think-Pair)

Or, if you have started with the quote:

5) Look at the quote taken from the play again:

“Maths itself, science itself, cannot be good or evil. It is correct or incorrect, regardless of any later applications.”

Bruno justifies his contribution to the bombing of Dresden.

6) Discuss his thesis. Refer to the play and find further arguments for your point of view. (Think-Pair)

7) Come back to your position line. Find your spot in the classroom. If your position has changed, explain why. (Share)

8) Optional homework: Write a discussion based on Bruno’s thesis.

Appendix

Collage Science and its moral consequences¹⁰



- 1) Choose a picture and describe it to your neighbour.
- 2) Discuss the positive and negative consequences of these inventions.

¹⁰ Bildquellen: <https://www.google.com/amp/s/www.independent.co.uk/news/science/old-fashioned-light-bulbs-could-be-set-for-comeback-after-light-recycling-breakthrough-a6806446.html?amp>
(Stand: 12.09.22)

https://en.m.wikipedia.org/wiki/Automotive_industry (Stand: 12.09.22)

<https://www1.racgp.org.au/newsgp/clinical/contraceptive-pill-to-remain-prescription-only-at> (Stand: 12.09.22)

<https://www.welt.de/themen/smartphone> (Stand: 12.09.22)

<https://www.saechische.de/politik/politiker/robert-habeck/habeck-zwei-akw-sollen-bis-mitte-april-als-notreserve-dienen-5753219.html> (Stand 12.09.22)

Answers Quiz

- 11) How do Ava and Jamie meet?
- e) He is one of her students
 - f) On a tinder date**
 - g) On a bus
 - h) They used to go to school together
- 12) Despite of a rather unsuccessful date, Ava is interested in Jamie. Why?
- e) Because of what he tells her about his famous grandfather.**
 - f) Because of his good looks.
 - g) Because she needs a place to stay after having lost her job.
 - h) Because she lives very far away and has missed her last bus home.
- 13) Ava wants to learn something about Jamie's grandfather, she did not know before. What does he tell her?
- e) He tells her that his grandfather was secretly gay.
 - f) He tells her that his grandfather had 12 children.
 - g) He shows her poems his grandfather had written but never published.
 - h) He tells her about a secret room, his grandfather has kept locked.**
- 14) Ava and Jamie go through the sealed boxes in the once locked room. What do they find that shocks Jamie?
- e) Nazi memorabilia proving Bruno's secret admiration for the Nazi regime
 - f) Adoption papers proving that Jamie is not related to Bruno after all.
 - g) Love letters from another woman than his grandmother.
 - h) Papers that prove Bruno's contribution to the invention of bombs used for the bombing of Dresden and the bombing of Hiroshima.**
- 15) Ava criticizes Bruno's work. Choose the sentence that describes her reasons best.
- e) She accuses him of being responsible for many unnecessary civilian deaths and of misusing science for murder.
 - f) She accuses him of sloppy and superficial work.
 - g) She thinks he was blind to the faults of mankind and painted a too positive picture of his own species.**
 - h) She believes that Bruno should have published his insight-knowledge about the governmental projects.
- 16) George is Bruno's colleague. What else do we learn about George?
- e) George is secretly involved with his former roommate from college and is a spy for the Germans, leaking information about the bombs he and George try to engineer.
 - f) George lives with his former roommate from college but is in love with Bruno's wife.
 - g) George recruits Bruno but later dies in a bombing.
 - h) George lives with his former roommate from college in a secret relationship. He loses him in a bombing.**

17) George and Bruno worked together on their secret project. In hindsight, they deal very differently with what they've done.

- e) **While Bruno starts a new secret project involving atomic bombs, George cannot shake the guilt arising from his contribution to taking civilian lives after having lost his own partner in a bombing.**
- f) While Bruno tries to forget, George kills himself
- g) George gets married and starts a family while Bruno opens a fund for relatives of bomb victims.
- h) George and Bruno fight about the ethical responsibilities of science and eventually agree to never work with or see each other again.

18) How do Ava and Jamie part?

- e) Ava and Jamie agree to meet again the next day to keep sorting through the files.
- f) Ava is not interested in Jamie as a partner but promises to keep his family secrets safe.
- g) **Ava leaves, taking all their findings with her against Jamie's will in an attempt to save her career with a new paper or book about Bruno Bronowski.**
- h) Jamie leaves all the files to Ava hoping that he will learn more about his family history with the help of her research.

19) How many time periods does "Secret Life of Humans" span across?

- e) 4
- f) 1
- g) **3**
- h) 7

20) According to Ava and Bruno, the only thing we have learned from history is...

- e) ... that our ancestors keep living inside us.
- f) **... that we do not learn from history.**
- g) ... that instinct is more influential than knowledge.
- h) ... that science does not kill. Ignorance does.

Talks with Jacob Bronowski

Hiroshima Talk BBC

<https://www.youtube.com/watch?v=DFgnGUL78MU>

The Ascent of Man - Auschwitz

<https://www.youtube.com/watch?v=kqAocgZUpDo>

