

# **The Triumph of Reason**

**a play for Elston, first home of Erasmus Darwin**

**by Andy Barrett**

*The stage is dark. The performers walk on with lanterns. Together they say:*

**All:** 'Nature and nature's laws lay hid in night  
God said, 'Let Newton be', and all was light'.

*An eruption of light. Fades to reveal a central window which opens and a late eighteenth century figure appears – Immanuel Kant. (Maybe we announce all of the scientific and historical characters using the screen).*

**Kant:** My friends we have emerged from centuries of darkness and ignorance into a new age, an age enlightened by reason, by science, by respect for humanity. With reason, that most potent of weapons, an unending progress is inevitable. Progress in technology, in prosperity, and in knowledge. And knowledge is a light. It is a guide. It is a right and it is a weapon. Dare to know, my friends.

**All:** Dare to know!

*Music.*

*Kant closes the window. From the whole of the playing area there is much activity – men carrying out a variety of experiments; men writing in books; men playing with electricity; men flying kites. There should be steam; naked flame; ingenious contraptions; and sparks.*

*Maybe we can identify some of these men and the experiments they are doing by momentarily isolating them and explaining who they are on the screen e.g. Benjamin Franklin 'catches' electricity. A woman – the Narrator – walks through the middle of these men. She is carrying a book.*

**Narrator:** The mid eighteenth century. The Enlightenment. Full of men with an unshakeable faith in the power of human reason, and an interest in the physical properties of fundamental things. And here, right here, at Elston Hall is born a man, a Lunar Man, who will be one of the greatest Enlightenment men of them all, admired throughout Europe. Friends to the greatest inventors, engineers, philosophers and poets of the day. A Darwin. Erasmus Darwin. Throwing himself into the spirit of enquiry from the earliest age possible, experimenting with electricity and gunpowder.

*A very loud explosion and we see three children with blackened faces and their hair standing on end.*

**Narrator:** And I am here, tonight, to tell you his story because of this book and these two letters. Left to me by grandmother who, like Erasmus, was born here in Elston. Family heirlooms that nobody has understood until now. 'Experiments on the Generation of Air from Water' by Joseph

Priestley. And inside two letters. This one, dated May 16<sup>th</sup> 1770. For painting a motto onto the carriage of Dr Darwin. 5d. And this one. Dated October 12<sup>th</sup> 1770. For painting out a motto on the carriage of Dr Darwin. 3d.

That's it. Nothing more. But within these two bills lie a tale of love and science, of friendship and revolution, of serendipity and rupture.

*The Experimental men exit and we see two men – a vicar and Robert Darwin.*

**Vicar:** Robert! Robert!

**Robert:** What is it Reverend?

**Vicar:** I've found a skeleton in a slab beside the well at the Rectory. Everybody I've shown it to says it's human, and that it's probably from the battle of East Stoke. But I'm not so sure.

**Robert:** Let me see.

*Robert and Vicar exit and as they do so Sir Isaac Newton gets up to speak.*

**Narrator:** That's Erasmus's father. Robert Darwin. A retired barrister with a taste for science.

**Newton:** Welcome to all our guests at this meeting of the Royal Society where we have the pleasure of further inspection of a fossil provided from the town of Elston which we have concluded is not a known terrestrial animal but some sea fish or amphibious creature.

**Narrator:** And that's Sir Isaac Newton. President of The Royal Society. The man who insisted on method. On drawing conclusions from experimentation and observation. And the vicar was right. It wasn't a human relic. It was the first known fossilised skeleton of a Jurassic reptile that the world had ever seen. Plesiosaurus dolichodeirus. Between 194 and 208 million years old. It was found in a well just over there. Which is a fitting prologue to a story that tells of things uncovered and then buried again. So let me begin....

*A trolley with a covered corpse is brought on by two assistants and a physician accompanying them. As this is happening the narrator continues:*

**Narrator:** Away from the Hall now. First to take Erasmus to Chesterfield, then to Cambridge, and then the Edinburgh Medical School.....

**Boerhaave:** Good afternoon gentlemen.

**Narrator:** .... the most noted in Britain, run under the influence of the great physician and mechanist Hermann Boerhaave who was attempting to find chemical and physical explanations for all of the bodily functions.

*The sheet is lifted by the two assistants and Boerhaave takes a knife to it, blood spurting everywhere. (Anatomical film).*

**Boerhaave:** I believe, like Descartes, that man should be considered as a hydraulic machine, whose pipes are filled with fluids capable of chemical fermentation, while the pipes themselves are liable to stoppages or obstructions. And that through these stoppages, obstructions and fermentations, all diseases are imputed. That will do for now.

*The sheet is put back down again. And Boerhaave and his assistants exit.*

**Narrator:** Which is probably one of the reasons why Erasmus was so interested in mechanics.

*Darwin enters and sits on a chair (that will become the coach). He is writing a letter.*

**Narrator:** And now his life as a Doctor has begun.

**Darwin:** My dear friend Reimarus, I have decided to end my practice in Nottingham having only received one patient, a shoemaker who was stabbed with a conical knife, by another shoemaker, just under the cartilage's of the ribs on the left side. After prescribing Peruvian bark the patient slept well, his diarrhoea stopped and he appeared cheerful. However at night the pulse became imperceptible. This was followed by convulsions of the face, death and dissection. No fee was charged. I plan to move to Lichfield.

*As he has been writing this the carriage has been constructed around him.*

*It begins to shudder and shake. (Can we use film through the window or some other device to show movement?).*

**Darwin:** Dear mother, by a stroke of luck I have become something of an instant success. A Mr Inge, having sought out the celebrated Dr Wilkes was informed that speedy death must ensue. His mother, wild with terror for the life of her only son sent for me and through a variety of potions and eminently sensible suggestions Mr Inge is now a fit a man as can be seen in the drawing rooms of Lichfield. I am since established.

*A huge jolt.*

No wonder so many physicians make their wills before setting out on a journey. I spend half of my life being joggled and jostled and bumped and bruised, not to mention finding myself standing in the mud alongside an upturned carriage. They say the physician is more deadly than the disease but I think the carriage is the most deadly of them all.

I must put my mind to improvements.

*He takes a quill and a notebook and begins to scribble ideas and draw diagrams. As he does so we see these on the screen. (p62/63 Hele).*

*At the same time the lights come up on Edgeworth who is writing a letter. The Narrator walks up to him and takes his pen and dips it in the inkwell for him to continue writing.*

**Edgeworth:** Dear Doctor Darwin, I have designed a phaeton based on your principles, as explained to me by the owner of that wonderful mechanised miniature of the planets, the Microcosm. The model has received official approval by the Society of Arts and I have dutifully told them that it was your idea and not mine. I hope that one day we can meet to talk further about all things mechanical.  
Yours Richard Edgeworth

**Narrator:** A friend for life. Erasmus was in the middle of a letter to him when he died.

*A Drawing Room: Darwin, Edgeworth, his wife Polly, Canon Seward, and his daughter Anna Seward.*

**Darwin:** Richard, may I introduce my wife Polly, the poetical Canon Seward, and his daughter Anna, also an imbibor of the lyrical spirit. And very precocious too.

**Anna:** Please Erasmus.

**Darwin:** And if I may say so, actually superior to her illustrious parent.

**Polly:** Erasmus!

**Darwin:** I'm sorry. But I am sure that as a proud father the Canon would agree.

**Seward:** She shows promise. Yes.

**Anna:** Has Mr Darwin told you that he writes poetry as well Mr Edgeworth?

**Darwin:** Mr Edgeworth has finer things to consider than words. He is a fellow inventor.

**Polly:** Well Mr Edgeworth I hope you do not fill your home with as much apparatus as Erasmus has. I came home yesterday to find our best glasses filled with turpentine and hanging from the chandelier. With Erasmus balancing on a stool warming them all with a gas lamp.

**Darwin:** I've become fascinated on the ascent of vapour.

**Polly:** And our guests last night were fascinated by the appalling taste of their Madeira.

**Darwin:** Come let us leave the ladies with the Canon for a while and wax mechanically.

*Darwin and Edgeworth now move across to another space, talking as they do so. And as they talk about their ideas so we see plans and charts and diagrams on the screen.*

**Edgeworth:** Just imagine Erasmus, a sailing carriage, whereby the wind will transport a man along the road.

**Darwin:** Yes, wonderful, but why use wind when we can harness steam? Consider a fiery Chariot, two cylinders operating from one boiler. I am asking Boulton if he thinks it feasible. If so you can help me build it.

**Edgeworth:** Boulton?

**Darwin:** Yes. Matthew. A buckle maker with a drive for success unlike any man I have seen before.

**Edgeworth:** Is he searching for new inventions?

**Darwin:** Always. Right now he is working on producing a more accurate thermometer to help us all with our measurements. Ever since he has met Mr Franklin he is constantly experimenting with heat and electricity.

**Edgeworth:** Benjamin Franklin?

**Darwin:** The best philosopher of America. And a wonderful man. You should meet him. Now tell me more about these inventions that you want to impress Matthew with.

**Edgeworth:** I have invented an umbrella for covering haystacks. And I have just built a hollow wheel containing a barrel in which you can stand and push forward simply by walking.

**Darwin:** Wonderful. The art of propulsion. One day I truly believe that we will be able to fly through the skies.

**Edgeworth:** I have yet to delve into the field of artificial flight. And you?

**Darwin:** I am working on an artificial goose.

*Darwin takes it from his pocket.*

**Darwin:** Here. I have a watch spring at one end of the frame, and the other wrapped round an axis. And at each end of the axis there is a wheel with teeth. I have managed to construct it so that the wings move like a ladies fan.

**Edgeworth:** Does it work?

**Darwin:** Try it.

*Edgeworth winds up the bird which flies away.*

**Darwin:** A fool you know, is a man who never tried an experiment in his life.

**Edgeworth:** Excellent.

**Darwin:** You must join us fellow lunaticks. I know that you will be welcome.

*The Narrator now enters and opens the book.*

**Narrator:** ‘Dedicated to the Lunar Society, which both encouraged and enlightened me’. That’s what it says on the front page of this old book.

*And now we see the Lunar Society gather. They each walk behind tables that are covered and which will have their props underneath – Priestley (in a long black coat); Small; Watt ; Boulton; Whitehurst; Keir; Wedgwood.*

**Narrator:** A group of men, meeting every full moon so that they can walk home safely from each others houses. Gathering for the pleasure of playing with experiments...

**Darwin:** A little philosophical laughing...

**Narrator:** And united by a common love of science.....

**Priestley:** Which we thought sufficient to bring together persons of all distinctions, Christians, Jews, Mohametans, and Heathens, Monarchists and Republicans.

*The narrator uncovers his table full of steaming cups and glasses, candles, piles of ash and a burning glass. (Look at p229 – 231 Uglow for scientific apparatus and description of experiments leading to the isolation of oxygen).*

**Narrator:** Joseph Priestley. Ever the optimist.

**Priestley:** The morning is upon us and we cannot doubt that the light will increase and extend itself more and more into the perfect day.

**Narrator:** And one of the greatest experimental chemists of the time. No single person ever discovered so many new and curious substances. Ammonia, sulphur dioxide, carbon monoxide..

**Priestley:** And this, my most important discovery yet. Dephlogisticated air.

**Narrator:** Oxygen. Although he is ultimately more interested in theology than chemistry, with even more explosive results.

*Uncovers the next table – a crate of wine.*

**Narrator:** William Small. The father figure of the group. A Scottish Doctor whose lectures in Williamsburg, Virginia had fired a generation of students.



**Small:** *Reading the accompanying letter with the wine.* ‘To my old friend and mentor, from Thomas Jefferson’. Always a good pupil. And such a way with words.

**Narrator:** And who will write the American Declaration of Independence.

*From a window Jefferson appears and declares:*

**Jefferson:** We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness.

*Uncovers the next table. A model of a steam engine. A billow of steam.*

**Narrator:** That’s James Watt who in a few years time will excite the curiosity of a number of scientific gentlemen who have been invited to see the first movements of a steam engine constructed upon his new principles.

**Watt:** In the presently used engine the steam is condensed by cooling the working cylinder, which then has to be re-heated, causing huge delay and inefficiency in its workings. However I have realised that the cylinder can be kept permanently hot by condensing the steam in a separate condenser, which can be kept permanently cold.

**Narrator:** Therefore doing more than any other single invention to bring about the modern technological era and to allow the Industrial Revolution to advance.

*This is the cue for the stage becoming a scene of heavy industry – smoke, flares.*

*The Narrator uncovers the next table and Boulton picks up a selection of account books and designs for various machines. We need to convey an entrepreneurial spirit.*

**Narrator:** And that’s Matthew Boulton, who will become his business partner, the first manufacturer of England, at his Soho metal works in Birmingham, known as the eighth wonder of the world.

**Boulton:** We sell here what all the world desires to have – POWER!

*Uncovers table with a large ‘geographical’ clock.*

**Narrator:** That's John Whitehurst, the brilliant clockmaker and geologist who will cause such a stir with his 'Inquiry into the Original State and Formation of the Earth'

**Whitehurst:** I am working on a 'geographical' clock, surmounted by a revolving globe which will show the position of the sun at the appropriate date. The globe revolves every twenty four hours so that you see at every instant what part of the world is enlightened and what is in darkness.

*Uncovers table with bottles of chemicals and a very large dusty book.*

**Narrator:** James Keir. Another brilliant scientist, and pioneer of the chemical industry who is working on his translation of Macquer's Dictionary of Chemistry.

**Keir:** The acid of ants can be perceived by smell on turning up an ant hill in spring or summer and obtained by distilling twenty four ounces of ants in a warm bath until the acid forms crystals.

*Uncovers a table with a variety of clays.*

**Narrator:** And that's Josiah Wedgwood, the world renowned potter and industrialist putting the finishing touches to the nine hundred and fifty two piece dinner and dessert service that Catherine the Great of Russia will go on to order.

*We hear a plate being smashed.*

**Narrator:** Nine hundred and fifty one. And Erasmus Darwin. The centre of gravity around which all of these men revolve. Sending him copies of their papers; requesting his views on their inventions and vases; receiving his money and equipment to pursue their experiments. And who will himself become famous for.... ..no, wait, let's not rush ahead. Gentlemen please raise your glasses.

*They all gather round the Narrator and raise a glass.*

**Narrator:** The Think Tank of the Enlightenment. Visionary men involved in visionary projects.

*The Narrator exits and the toasting continues.*

**Wedgwood:** My friends, as you all know, today Royal Assent has been given for the construction of the Grand Trunk Canal.

*Cheers*

**Wedgwood:** We will begin work immediately, with the great Mr Brindley as Surveyor General.

**Boulton:** I will never forget my initial impressions of his canal from the Worsley mines to Manchester. There were gasps of amazement when we saw the aqueduct at Irwell. Barges as high as tree tops, hanging in the air. Has anything been constructed that is so audacious and beautiful?

**Wedgwood:** Maybe now that we have been successful Erasmus will admit to being the author of the pamphlet that did us so many favours.

**Darwin:** I have built up a reputation as a Doctor. Patients do not like to think that their physician's mind may be elsewhere. And many of my richer clients are opposed to canals.

**Watt:** There is always opposition to the new. Sometimes I wonder what the point of inventing is.

**Boulton:** If there wasn't any opposition James then we would know that we are not being dynamic enough.

**Keir:** Canal building is a young mans game.

**Small:** But what a game it is. Men making their mark on the land. They will transform society.

**All:** Hear, hear.

**Wedgwood:** Gentlemen, a toast, to the most formidable engineering project that has ever been attempted in England.

**Whitehurst:** And have you decided on a motto for the project?

**Wedgwood:** We have. Pro patria populoque fluit. 'It flows for country and people'.

*They exit and Erasmus sits at his desk. His wife, Polly, enters.*

**Polly:** It is late.

**Darwin:** I know.

**Polly:** You look tired.

**Darwin:** I am busy. My practice is growing every day. And there is so much to learn and keep abreast of in the fields of science.

**Polly:** You read so much.

**Darwin:** I aim to learn a little every day. Do you know that in Italy a man called Galvani has just discovered that a muscle in a dissected frog contracts when a spark is fired from an electrical machine.

**Polly:** Erasmus.

**Darwin:** Maybe the whole body is but one big electrical circuit.

**Polly:** Erasmus!

**Darwin:** I'm sorry. How are you? Is the opium working?

**Polly:** It helps.

**Darwin:** These blasted journeys. I am seldom for an hour together in my absence from home free of tears on your account. A doctor who cannot help his own wife.

**Polly:** What are these?

**Darwin:** Excavations from the Harecastle Tunnel. The earth is beginning to give up its secrets Polly. Josiah will not stop sending me the things. He thinks that as I'm a Doctor I should be able to identify them.

**Polly:** And can you?

**Darwin:** No. I cannot. This one looks like some kind of fern. And this must be a bone, perhaps the third vertebra of the back of a camel. And what is this? (*not having a clue, jokingly*) Maybe the horn of a Patagonian ox.

**Polly:** There are some that would say these are a sign that God has decorated his rocks with ornamental replicas of living things.

**Darwin:** And there are some that will say that the planet is only six thousand years old. That it is a static ruin, carved from the flood. Why do we persist in believing such things?

**Polly:** You have to be careful with your views. You are a Doctor.

**Darwin:** I believe that there exists a being of beings who formed mankind.

**Polly:** God?

**Darwin:** I prefer not to use that word.

**Polly:** Please Erasmus. I am in no mood for your philosophical bantering.

**Darwin:** If 'God' is not required to roll this planet round the sun then why should he be required to give us each our daily bread? The light of Nature affords us not a single argument for a future state; this is the only one. *Picking up the fossils*. What are these? I am to enter the bowels of the earth Polly. Maybe I shall find some answers there. John Whitehurst has become fascinated with the caves of Derbyshire and has invited me to go exploring with him.

*Darkness. The sound of dripping. Whitehurst and Darwin with candlelit lamps.*

**Darwin:** It is beautiful John. There is such a variety of rock and quartz.

**John:** I've lost count of the samples Josiah has received from me.

**Darwin:** He will not rest until he has tested every mineral known to man. If only the ladies knew how much investigation went into their teapots.

**John:** Erasmus I have found balsatic lava and volcanic ash here in Derbyshire. I am convinced that it is subterraneous fire that has shaped the earth. That the expansive force inside the very centre of the planet is responsible for pushing out the strata.

**Darwin:** The walls are full of shells. Look. Trilobites. Bivalves. Corals.

**John:** Yes.

**Darwin:** I feel as though I am inside something that is living John, some mythical beast. That I can feel some slowly ticking pulse. You are right. It is obvious. The earth is a theatre of active processes. Constantly changing. All of it. All of nature. With no vestige of a beginning – no prospect of an end.

*As they exit the Narrator appears.*

**Narrator:** Insight comes in many forms. Archimedes in the bath. Newton under his apple tree. Watt's as he was walking across the Green in Glasgow one Sunday afternoon. But some revelations are too dangerous to declare. Or at least to declare openly.

*A painter arrives.*

**Painter:** Morning Mr Darwin.

**Darwin:** Good morning Mr Shaw. I have a job for you. I would like you to paint this on the side of my carriage.

*He hands a piece of paper to the painter and then goes to his desk. (Maybe we see the painter working on the carriage).*

**Narrator:** May 16<sup>th</sup> 1770. For painting a motto onto the carriage of Dr Darwin. 5d.

*Canon Seward enters.*

**Seward:** You have become very successful since moving here.

**Darwin:** Yes.

**Seward:** And you mix with auspicious men.

**Darwin:** We live in auspicious times.

**Seward:** Anna says that Benjamin Franklin was here last night.

**Darwin:** Yes.

**Seward:** And what did you talk about?

**Darwin:** Phonetics. Mechanical methods for producing sound. And possible designs for a speaking machine. I have begun to make some sketches. Would you care to see them?

**Seward:** No.

**Darwin:** I have analysed the vibrations of air which give rise to each of the sounds of speech and how they are produced through the operation of the lungs, the larynx and the muscles within. I think that maybe my machine will only require thirteen movements. That if built in a gigantic form it might speak so loud as to command an army or instruct a crowd.

**Seward:** I am not interested Doctor Darwin. And I am surprised that you did not talk about your more recent theories.

**Darwin:** I'm sorry, I do not know what you mean.

**Seward:** Do not think that you can hide your odious views from me by painting them in Latin on your carriage. You and your friends may believe that you treat the world as one big experiment and shun all morality, but you are wrong. Be careful Doctor Darwin. Be very, very careful.

*As the lights go out on that scene we see a poet, declaring flamboyantly:*

**Poet:** When proud Derby's glittering vanes you view  
And her gay meads your sparkling currents drink,  
Should bright Eliza press the morning dew,  
And bend her graceful footsteps to your brink

**Narrator:** Even an inventive man has time for love. And it's love that moves things on.  
Love. And death.

*The tolling of a bell.*

**Narrator:** Polly. There was no potion he could find to help her.

*A window opens and Darwin's mother appears.*

**Mother:** Erasmus!

**Darwin:** Yes mother.

**Mother:** I am sending you a young lady from the village to help look after little Robert.  
Mary Parker. She's a good girl.

*We see a young woman walk across the stage with a case.*

**Mother:** And your sister Susannah will move in with you and act as housekeeper. Are we agreed?

**Darwin:** Yes. Of course.

**Mother:** I hear that you are thinking of becoming an author.

**Darwin:** I have started work on a medical book.

**Mother:** A medical book? Not poetry?

**Darwin:** Oh no.

**Mother:** Good. Such sentiment is no use to a man who is trying to earn his keep. The last thing a patient wants to see when they are on death's door is a man with a head full of flowery phrases.

*Shuts the window.*



**Narrator:** His mother. Elizabeth. Who lived to the age of ninety four, and to the last day of her life got up to feed the pigeons. Some said she liked to smother her boys. Robert the eldest and John the youngest never got away from her, or Elston. Robert was Lord of the Manor, John the Rector. Not that Erasmus seemed to think badly of her.

**Darwin:** A better mother never existed.

**Narrator:** And it turns out that she chose well. Very well.

*Lights up on a group of ladies, 'The Ladies of Lichfield', sitting having tea.*

**A:** Have you heard that our unconventional Doctor Darwin has taken a lover?

**B:** Really?

**A:** His housemaid.

**D:** But she's only eighteen.

**C:** I've heard that Anna Seward is distraught.

**A:** Well the Canon would never have agreed to a match after all that fuss over his carriage.

**B:** He may think he's ever so clever but he soon painted over it didn't he?

**D:** He had no choice. He was beginning to lose patients. Lady Clive said that she would rather die than have his advice if there was not another physician in the world.

**C:** I don't think he would be too bothered. He's becoming more famous by the day.

**D:** He's treating George Stubbs wife now.

**B:** Really?

**D:** They say she's got the greatest number of rotten teeth in the highest degree of decay ever seen in one mouth.

**A:** No wonder he's off painting horses all day.

**D:** He's advised that her teeth be drawn and twenty electric shocks to be passed through the sore parts twice a day for a month.

**B:** I'm sure the neighbours will be pleased.

*They all eat their cake.*

**A:** Well I'd rather he left.

**C:** What do you mean?

**A:** All these strange people that turn up at his house.

**C:** What are you on about, strange people?

**A:** Every time there's a full moon.

*We see the Lunar men, and Franklin.*

**A:** All carrying notebooks.

**Lunar Men:** To inventing!

**A:** And if you walk past the house you can see strange lights coming out of the window.

**Lunar Men:** To industry!

**A:** And inside they're all laughing as they get up to demonic things.

**Lunar Men:** And liberty!

**Franklin:** And the Boston Tea Party.

**C:** What are you on about, demonic things?

**A:** You know, messing with nature.

**Wedgwood:** We are living in an age of miracles gentlemen. Anything can be achieved. But we have to make it happen. The world is not governed by clever men but by the active and the energetic.

**B:** Playing God. That's what they're doing.

**C:** They're penetrating the processes of nature for the purposes of liberating mankind.

**D:** Listen to her.

**A:** Liberating us from what?

**B:** Liberating us from morality obviously. So that you can get away with having an affair with a housemaid less than half your age.

*Music.*

*The group of Lunar Men – with others – now begin to create the painting 'An Experiment With A Bird In An Air Pump'.*

*As this is happening a window opens – Elizabeth Pole – is standing there.*

**Narrator:** That's not the housemaid. That's Elizabeth Pole. The new object of his affections. Married to Colonel Pole. And a patient. Thanks to a painter.

*Joseph Wright now walks in front of the recreated painting.*

**Wright:** Erasmus has been my Doctor now for many a year and I am constantly seeking his advice.

*From the 'painting' Darwin calls out:*

**Darwin:** You are a hypochondriac Joseph! Worse than Mr Watt.

**Wright:** I am frail.

**Narrator:** After his wife died in 1790 Wright became anxious about high winds blowing down chimneys and could not sleep.

**Wright:** I told you I'm frail.

**Narrator:** Joseph Wright of Derby, the painter of the Lunar spirit. Light bursting forth and illuminating the darkness.

**Wright:** That'll do for now.

*The painting is now shown on the screen and everybody disperses.*

**Wright:** Wait Erasmus. Just one moment..

*Erasmus is now left in position on his own. The painting on the screen fades away leaving the character of the man with the watch, (which is the position Erasmus is in).*

**Narrator:** And commissioned by Colonel Pole to paint a series of portraits at Radburn Hall.

**Wright:** Thank you.

**Narrator:** Where Eliza lives

*Bags being thrown out of a window. Colonel Pole sticks head out:*

**Pole:** I don't care how ill my wife is, you have given some medicine and that is enough.

**Darwin:** I should stay. I really should.

**Pole:** And do what? Make her better by spouting poetry? Leave her alone.

**Darwin:** Please.

**Pole:** Doctor Darwin. I have fought in eleven battles. I have been left for dead in the field in three of them. At the battle of Minden a bullet went through my left eye and came out at the back

of my head. What would you prescribe for that? Bark? Rose petals? A dandelion? Now away with you, buffoon! Go and spend the night under a tree and let your bosom heave or whatever it is stupid poetic people do.

**Narrator:** And he did. But it wasn't just the poems that he wooed her with. For his Eliza was also caught up in the spirit of the times.

*At this we see a line of people arriving carrying plants – the stranger the better. They show them to a couple of characters with clipboards who shake their heads – they have no idea what these are.*

*Captain Cook is with them.*

*The following section is accompanied by maps and diagrams on the screen – of Cooks journey and of the calculations of longitude.*

**Narrator:** The great voyage of Captain Cook. Sent to Tahiti to observe the transit of Venus across the Sun, enabling mathematicians to calculate the distance between the Earth and the Sun, and so enable a more accurate determination of longitude.

*Cook comes forward:*

**Cook:** They were also keen for me to confirm or disprove the existence of a Great Southern Continent, long-predicted by geographers since ancient times.

**Narrator:** Accompanying Cook on the voyage was Joseph Banks, the Botanist.

*Banks comes forward and bows.*

**Narrator:** After making their observations in Tahiti The Endeavour sailed down to New Zealand, took it for the King, proved that there wasn't some enormous counterbalancing land mass and hitting a storm stumbled across the south east coast of Australia – or New Holland as it was called then. And it was there that they came across a large natural harbour full of exotic plants – hence the name Botany Bay. And brought them all back. To the dismay and amazement of the world. New species. Many, many new and exotic species. That will throw the classification system as it currently stands into chaos.

*A group of five characters enter, talking together. On the screen we see 'The Society of British Botanists'.*

**A:** Ladies and gentlemen, the pursuit of botany is being cheapened.

*Hear hear!*

**A:** As we are all agreed botany is one of the few scientific areas that a woman may find herself capable of. And yet now we discover that this most delicate of pursuits is under threat, thanks to the work of this Swedish scoundrel Carolus Linnaeus who has organised plants according to their sexuality. *Holds up a copy of Linnaeus's 'Systema Natura'.*

**B:** How can a plant be sexual?

**A:** Exactly.

**B:** I think there's something wrong with him.

*Hear hear!*

**C:** Nonsense. We all know that plants are sexual.

**D:** Do we?

**C:** Yes. It was proved years ago that plants have the equivalent of male and female parts.

**D:** Was it?

**A:** Well yes, but we just don't like to talk about it. For the ladies sake.

**C:** All Linnaeus is doing is providing a simple and solid system. Twenty three classes decided upon by the number of stamens, the male genitals,

*I say!*

**C:** ...divided into orders by the structure of the stigmas, the female genitals....

*I say!*

**C:** ...with the supporting structure, the calyx, becoming the nuptial bed.

*I say!*

**E:** But this means that some flowers will have more than a single male sharing a bed with a female.

*Outrageous!*

**C:** They're plants!

**B:** And they should know better!

**C:** Somebody had to come up with a new system!

**D:** Did they?

**C:** Of course. The existing Aristotelian method is collapsing under the weight of all these newly discovered species.

**A:** Well they should stop discovering them then. Anyway it's not that bad.

**C:** Solanum caule inerme herbaceo, foliis pinnatis incis, racemis simplicibus..

**A:** And?

**C:** It's a tomato!

**A:** Alright. Maybe it does need rationalising. But does he have to be so vulgar. Some structures have been compared to...to... the labia.

*Outrageous!*

**A:** And he has a whole class of flowers named the Clitoria.

**B:** Over here, somebody's fainting.

**D:** Are they?

**A:** Let's just hope nobody translates it.

*Lights up on the other side of the stage. Darwin is taking Wedgwood's pulse.*

**Darwin:** I have decided to translate the works of Linnaeus from Latin into English.

**Wedgwood:** You have become an ardent Botanist ever since you started creating your garden. What happened to your geological interests? Is a rock not as alluring to Eliza as a flower?

**Darwin:** The liberation of botany from the yoke of Latin description is a vital scientific task.

**Wedgwood:** Don't we all love our classifications and dictionaries and encyclopaedias. Have you seen Temple Croker's?

**Darwin:** It is being sent to me.

**Wedgwood:** What a modest title. 'The Complete Dictionary of Arts and Sciences. In which the whole circle of human learning is explained, and the difficulties attending the acquisition of every art are removed'.

**Darwin:** We are ordering our findings. What use is knowledge if it is strewn around?

**Wedgwood:** Exactly. It is only when you have the whole dinner service in front of you that you realise you need another dessert bowl. Talking of which have I told you how much trouble this service for the Empress of Russia is causing me?

**Darwin:** No.

**Wedgwood:** Every piece has to have a different view of the British Isles. I spend half my day explaining to irate landowners why their stately home is squashed across a saucer while their neighbours spreads across a serving plate.

**Darwin:** You are as fit as ever. How is the wooden leg holding up?



**Wedgwood:** Wonderfully. And I've found that it's perfect for smashing substandard crockery. Are you coming to the meeting tomorrow? We are to conduct some experiments in memory of our great Dr Small.

**Darwin:** No. I am sorry. I have to travel to a patient. I am afraid I will miss our lunatic bantering for once.

**Wedgwood:** Priestley will miss you.

**Darwin:** We always argue about religion.

**Wedgwood:** He says you have a vital spark that ignites all of our imaginations.

**Darwin:** I worry about him.

**Wedgwood:** Why?

**Darwin:** The most brilliant chemist of his age and yet he continues to spend his time with theological sophistry. His belief in the ultimate providence of God.

**Wedgwood:** He told me that you suggested that water can be decomposed. That it may not be a simple element.

**Darwin:** Yes.

**Wedgwood:** He has been experimenting ever since by exploding hydrogen and air in a glass vessel.

**Darwin:** Good. And he should stick to his experiments.

**Wedgwood:** He is as busy and varied as the rest of us. Setting up his Sunday schools with his syllabus of literacy, history, chemistry and dissent. He will become a lightning rod in this country just as Benjamin is becoming for the American cause. The King is calling him the evil genius behind the revolution.

**Darwin:** It is all the electricity they have played with.

**Wedgwood:** Erasmus we have to stand firm. As friends and as progressive men. You know that what we are doing, all of us in our own ways, is questioning authority. On every level. And there will come a time when they will fight back with every weapon they can get their hands on.

**Darwin:** I am just a Doctor. I have nothing to fear.

**Wedgwood:** We shall see. *Picking up some notes.* What are these?

**Darwin:** I'm working on a poem.

**Wedgwood:** A poem!

**Darwin:** Yes. The Linnaean system is unexplored poetic ground. As rich in metamorphic possibilities as Ovid. He turned people into plants. I will turn plants into men and women.

**Wedgwood:** So she's not only turned you into a gardener, but a poet too.

*The tolling of the bell again.*

**Narrator:** Another death. Colonel Pole. Leaving a son, two daughters, Radburn Hall, six hundred pounds a year and Elizabeth crowded round by young fox hunting esquires and dashing militaries. But the poetry and the botany had worked.

**Elizabeth:** I impose one condition. You must leave Lichfield and live at Radburn.

**Narrator:** A further step towards nature. And Erasmus is writing now. Gathering in material from every available source.

*Music – maybe with live singing?*

*Erasmus is in his coach – now with a pile of books, a writing case, paper, cutlery, a hamper, fruit, sweetmeats, cream and sugar.*

*On the screen we see images and scribblings from *The System of Vegetables* and also of lines of poetry.*

*Eventually Darwin rises and goes to the other side of the stage to meet The Publisher – Joseph Johnson.*

**Johnson:** When I said I'd publish I didn't realise it was going to be as...weighty as this. How have you found time to cure anybody?

**Darwin:** I work in my carriage. A Doctor spends half his life travelling.

**Johnson:** And you're sure you want to be anonymous?

**Darwin:** It should be credited to the Botanical Society at Lichfield. With thanks to that great master of the English tongue Dr Samuel Johnson for his advice in the formation of the botanic language.

**Narrator:** The System of Vegetables. One thousand pages. One thousand and forty four categories of plants.

*A critic comes forward:*

**Critic:** The publication of this work is a matter of too much consequence in the annals of natural history to be passed over in silence.

**Narrator:** The Monthly Review. Who made sure that it wasn't passed over in silence with a review lasting twenty two pages.

*A window opens and Darwin's mother appears.*

**Mother:** You said that you were writing a medical book.

**Darwin:** I am but it's taking longer than I thought.

**Mother:** And have you many patients?

**Darwin:** Yes.

**Mother:** Even with the company you are keeping?

**Darwin:** I do not know what you mean.

**Mother:** Oh come on Erasmus. People here in Elston are talking about nothing else but your friendship with men like Franklin and Priestley.

**Darwin:** Two great scientists.

**Mother:** What has science got to do with anything! They are both insufferable. At least Mr Wedgwood's pottery is very pretty. And your brother tells me that you've become caught up in all this ridiculous balloon business as well.

**Darwin:** It is not ridiculous, it is wonderful.

**Mother:** Are we all meant to be impressed by the heavenly ascent of a sheep, a cock, and a duck?

**Darwin:** They came down safely.

**Mother:** But what could they tell us about it?

**Darwin:** The French Academy plan to send up a huge balloon with five criminals tied to it. I presume you'd prefer that.

**Mother:** Absolutely.

**Darwin:** Well I am planning to fly the first large hydrogen balloon in the country.

**Mother:** Oh Erasmus, why can't you stick to your medicine and keep yourself out of trouble.

*She shuts the window.*

**Narrator:** And he did. The 26<sup>th</sup> December 1783. One of many, following the lead of the Montgolfier brothers, caught up in Balloon Mania.

*Music. Many balloons begin to fly from behind the Hall.*

**Narrator:** Vincenzo Lunardi setting off from Chelsea with a cat, a dog and a pigeon in front of a huge crowd alongside the Prince of Wales and landing in Ware. And then, a year later, floating

off again with the most famous beauty of the day, a Mrs Sage and George Biggins, the inventor of the coffee percolator. Whilst balloonists were setting records every day, travelling further and further afield, boys across the land launched their little fire balloons igniting haystacks across the country.

And of course the Lunar men launched. From Birmingham with a collection of bottles to collect samples of air at different altitudes for Priestley. Rising four thousand feet in half an hour, and landing, if that is the word, rather forcefully in a tree.

**Darwin:** Rise! great Montgolfier! Urge thy venturous flight  
High o'er the Moon's pale ice-reflected light;  
High o'er the pearly Star, whose beamy horn  
Hangs in the east, gay harbinger of morn...  
Shun with strong oars the Sun's attractive throne,  
The sparkling zodiac, and the milky zone;  
Where headlong comets with increasing force  
Through other systems bend their blazing course.

*The Lunar group enter cheering.*

**Watt:** Every single bottle is smashed.

**Priestley:** It is of little importance. I have not time for gases at the moment. I am working on a sermon which I will preach on the anniversary of the Gunpowder Plot.

**Keir:** Joseph you have no tact.

**Priestley:** 'We are, as it were, laying gunpowder, grain by grain, under the old building of error and superstition, which a single spark may hereafter inflame, so as to produce an instantaneous explosion'.

**Keir:** You have to be careful with your rhetoric.

**Whitehurst:** James is right. You have no talent for publicity.

**Priestley:** I am a scientist and a theologian, not an entrepreneur.

**Keir:** Joseph please listen to our advice and temper your words. Look at what Josiah has achieved with his anti-slavery medallions. They are to be seen everywhere. Shirt pins. Coat buttons.

Bracelets. Brooches. Hairpins. I was even given some snuff last week by a man who had one set into the lid of his box.

**Priestley:** We are living in increasingly political times. There is soon to be a motion to repeal the debarring of Dissenters from civil office and the universities. Unrest simmers in Ireland and France becomes more volatile by the day. Making causes a thing of fashion is one thing but we have to speak out.

**Wedgwood:** Erasmus has told me that there are muzzles and gags made at Birmingham for the slaves in our islands and that if one could be exhibited by a speaker in the house of commons it might have great effect.

**Priestley:** Where is he?

**Watt:** He is constantly travelling to see to his patients.

**Whitehurst:** Or writing endlessly.

**Priestley:** Will he ever publish what he has already written?

**Wedgwood:** He is afraid what poetry will do to his medical reputation.

**Keir:** I have read a manuscript. I am convinced that that he can be the first poet of the kingdom if he will not suppress his talent.

**Watt:** He has a talent for invention.

**Wedgwood:** He has a talent for medicine.

**Priestley:** He has a talent for insight. He has just sent me one of the most brilliant papers I have ever read explaining the formation of clouds.

*The screens have clouds on them with equations and formulae being scribbled over the top of them. Darwin and Edgeworth begin carrying out experiments p226 King Hele.*

**Priestley:** The inventive Mr Edgeworth has come over from Ireland to visit him and the two of them have been experimenting together. He shows how air always cools when it expands from a

condition of higher pressure to lower pressure and then applies that principle to explain the coldness of the atmosphere several miles up. The formation of clouds is nothing less than the devaporation of aerial moisture. It is simple and it is brilliant.

**Wedgwood:** To absent friends.

**All:** Absent friends.

*As they toast the lights dim and there is a final culmination to the experiment on the other side of the stage. Darwin and Edgeworth shake each others hands – maybe they hug each other.*

*Darwin walks across to his publisher, Joseph Johnson.*

**Johnson:** At last.

**Darwin:** My friends have persuaded me. Even though I think of it as a frivolous thing.

**Johnson:** (*waving a huge wad of paper*) I am not sure we need so many notes. I am meant to be publishing a poem.

**Darwin:** No. They are essential. The poetry consists of pure description. It is visual, meant to amuse. Science demands prose.

*Lights up on The Lichfield Ladies. They are all wearing anti slavery medallions.*

**A:** I hear they're putting a bill before Parliament to abolish slavery.

**C:** Good.

**D:** What do you mean good?

**C:** It's inhuman. It's barbaric, degrading and savage.

**B:** You say that my dear but can you imagine how much the price of sugar would go up if the abolitionists got their way?

**D:** Exactly.

**C:** But you're all wearing Mr Wedgwood's medallion? 'Am I Not A Man And A Brother?'

**B:** Well that doesn't mean we necessarily want it banned outright.

**A:** They could just make things a bit better for the poor dears.

**D:** Of course Doctor Darwin has been speaking out about it to anybody who will listen.

**B:** Why can't medical men stick to medicine and leave the politics to the politicians?

**A:** Have you heard about Lady Northesk?

**D:** The woman who stopped off at Lichfield on her way home to Scotland to die?

**A:** Yes.

**D:** The woman who had been told by the most eminent physicians in the land that there was no hope for her?

**A:** Yes.

**D:** The woman who, thanks to the interventions of Doctor Darwin was saved from the grave and has been well ever since?

**A:** Yes.

**C:** Well?

**A:** Last week she set her clothes alight and died.

**D:** Terrible.



**B:** Serves her right for choosing Darwin in the first place. Anybody who chooses to acquaint themselves with such a man is sure to find themselves ultimately burning in hell. And as for this poem that he has meant to have written, well I shall have nothing to do with it. More tea?

*The Lunar Group come forward cheering – Darwin; Boulton; Wedgwood; Watt; Keir.*

**Wedgwood:** To our illustrious scribe, Doctor Darwin.

**Keir:** (*Reading*) ‘You will agree with me that the author is a great poet’.

*Cheers*

**Keir:** ‘I can read this over and over again’.

*Cheers*

**Keir:** ‘The most delicious poem on earth’.

*Cheers*

**Darwin:** It is only one view.

**Wedgwood:** It is the view of Horace Walpole. The doyen of the literary world. Everybody knows how difficult it is to impress him.

**Boulton:** And the rest of the critics love you too.

**Darwin:** Gentlemen. To all of us. Matthew, to the glory of Soho and your coining machine.

**Boulton:** I will make halfpennies rain from heaven.

**Darwin:** James. To the continued success of Tipton soapworks.

**Wedgwood:** When will you ever give us the secret of your alkali process?

**Darwin:** To Josiah on the unparalleled beauty of your Portland Vase which has startled the world. You set out to prove the happy union of science and art and have achieved it. To the brilliant Mr Watt whose steam engines power all of our industry. And to our absent friend Benjamin Franklin, who snatched the lightning from the heavens and the sceptre from their tyrants, and has finally overseen the election of the first president of the United States of America.

**All:** George Washington.

**Boulton:** I hope for the sake of balance Erasmus that you will toast the glorious recovery from the straitjacket of our own good King George. You know how I pride myself on diplomacy.

**Darwin:** And of course to the memory of our great friend and recently deceased John Whitehurst, with his endless and invaluable observation of rocks. Gentlemen, as men of science, and as friends we have witnessed and achieved amazing things. The world is turning in our favour. Of that there is no doubt. Nothing now can stop the triumph of reason.

**All:** The triumph of reason!

*This is the cue for a large pyrotechnic display from behind the Hall. It is both a climax to this part of the show – the gathering influence of the lunar group – and a moment of rupture, the French Revolution.*

*As it reaches its climax Priestley rushes in.*

**Priestley:** Glorious news. The Bastille has fallen.

*Cheers*

**Wedgwood:** My friends, let us be under no illusion, it is now is when our enlightenment will be most under threat. All of us engaged in the pursuit of progress and happiness will be viewed with increasing distrust, and we must all be on our guard. Good luck!

*Music. A group of Government Officials march on – Burke and two lackeys.*

**Burke:** The Lunar Group.

**A:** Yes sir.

**B:** Not one of them is to be trusted.

**Burke:** Business men should stick to making money and scientists should stop thinking they are above morality.

**A:** Priestley is particularly energetic in his demands for religious freedoms.

**Burke:** First America, then France. They will have us in their sights next.

**B:** And there is Doctor Darwin too.

**Burke:** Our atheist physician.

**A:** Indeed sir.

**Burke:** They do not understand that the Revolution is not a beginning but an end, the wrecking of all institutions, the vandalism of culture, the replacement of humanity by the rule of calculators and economists. No wonder all these businessmen desire it to happen so.

**B:** A Constitutional Society is being formed in Birmingham.

**Burke:** Really?

**A:** They are to hold a public dinner to celebrate the storming of the Bastille.

**B:** Keir is to be the Chairman.

**Burke:** All these damned chemists. Well let us fight back. Let us ridicule their causes. Let us sow chaos amongst their reason. Let us rouse the populace to despise these men who claim that their every selfish action is for the benefit of humanity. Come. To work.

*They exit.*

*From the windows of the Hall we see many handbills being thrown which flutter to the ground.*

*Lights up on Priestley who declares:*

**Priestley:** While so favourable a wind is abroad, let every young mind expand itself, catch the rising gale, and partake of the glorious enthusiasm. We must all prepare for persecution. We must all realise that the world may bear down particular men, but they cannot bear down a good cause. You cannot now hold the world in darkness. Struggle no longer against increasing light and liberality. Restore to mankind their rights; and consent to the correction of abuses, before they and you are destroyed together.

*The Lunar Group – Darwin; Watt; Wedgwood; Keir; Boulton.*

**Watt:** Have you seen this handbill?

**Wedgwood:** It is not from any radical I know.

**Darwin:** ‘Parliament is venal. The clergy nothing but legal oppressors. The Royal Family an unworthy extravagance. And the Crown too weighty for the head that bears it’.

**Keir:** It is the government. I know it. Stirring the masses.

**Darwin:** They will not succeed.

**Watt:** Joseph is being increasingly vilified. They have encouraged the vicars to preach against him.

**Darwin:** Everybody knows that if any ambitious cleric takes on Priestley that a mitre is theirs.

**Wedgwood:** They are calling him the arch priest of pandemonium liberty.

**Keir:** And gunpowder Joe.

**Boulton:** Each and every blank wall in Birmingham has ‘Damn Priestley’ chalked on it.

*The sound of fire now begins to build up.*

**Watt:** Let us hope that reason will prevail.

*Smoke pours out of a window. Books and flasks are thrown out. There is a sense of chaos, of violence. An angry mob appears shouting ‘No Philosophers! Church and King For Ever!’.*

*As this is happening Darwin comes forward to address the audience.*

**Darwin:** Almost all great minds in all ages of the world who have endeavoured to benefit mankind have been persecuted by them; Galileo for his philosophical discoveries was imprisoned by the inquisition; and Socrates found a cup of hemlock his reward for teaching ‘there is one God’. Your enemies, unable to conquer your argument by reason, have had recourse to violence; they have halloo’d upon you the dogs of unfeeling ignorance and of frantic fanaticism; they have kindled fires, like those of the inquisition, not to illuminate the truth, but, like the dark lantern of the assassin, to light the murderer to his prey.

We must work. All of us. Harder still.

*Music.*

*The Lunar Men move to various parts of the playing area to carry out their work. Darwin is sat at his desk which is covered in books and papers. More books and papers are brought to him from the Lunar Men as he works.*

*On the screen we see a flurry of information in different fields of science – notes, diagrams, equations, images.*

*Elizabeth enters and the music and the images fade.*

**Elizabeth:** What are you doing up at this time of night?

**Darwin:** I cannot sleep again.

**Elizabeth:** Your head is overflowing with ideas. You are reading too much.

**Darwin:** Nonsense.

**Elizabeth:** You cannot put everything into your poem.

**Darwin:** This is not a time for restraint. The roads from Joseph’s house were strewn with books for over half a mile. The floor of his library was covered several inches deep with torn manuscripts. We are battling for the soul of our age.

**Elizabeth:** Read me some.

**Darwin:** Through all his realms the kindling Ether runs,  
And the mass starts into a million suns;  
Earths round each sun with quick explosions burst,

And second planets issue from the first;  
Bend, as they journey with projectile force,  
In bright ellipses their reluctant course;  
Orbs wheel in orbs, round centres centres roll,  
And form, self balanced, one revolving Whole.

**Elizabeth:** I do not think there has ever been poetry like it.

**Darwin:** I have just finished the footnote.

**Elizabeth:** There are footnotes to everything.

**Darwin:** It must be understood. All of it.

**Elizabeth:** You are talking about the beginning of Creation.

**Darwin:** Yes.

**Elizabeth:** And you explain that?

**Darwin:** I say this. That 'it may be objected, that if the stars had been projected from a Chaos by explosions, that they must have returned again into it from the known laws of gravitation; this however would not happen, if the whole of Chaos, like grains of gunpowder, was exploded at the same time, and dispersed through infinite space at once, or in quick succession, in every possible direction'.

**Elizabeth:** And who makes the world of out chaos?

*He walks across to his publisher, Joseph Johnson.*

**Johnson:** It has notes again.

**Darwin:** Of course. They are vital.

**Johnson:** Eighty thousand words.

**Darwin:** I have been concise.

**Johnson:** The luminosity of tropical seas. Sugar making processes in vegetables. The individuality of buds.

**Darwin:** Doesn't that amaze you? That a tree is, properly speaking a family or swarm of buds, each bud being an individual plant.

**Johnson:** The formation of coal from buried forests. The disposition of the Earth's strata.

**Darwin:** What do you think of my sketch of a supposed section of the earth in respect to the disposition of the strata over each other?

**Johnson:** *Picking up yet another sheet.* A three tier model of the atmosphere.

**Darwin:** I am convinced that there is an outermost atmosphere of hydrogen.

**Johnson:** People have not even heard of these new words. Hydrogen. Oxygen.

**Darwin:** They will now.

**Johnson:** Oil on water; the history of steam engines; electricity; solar volcanoes. It goes on and on. And yet you want to call it The Economy of Vegetation.

**Darwin:** It is a poem about nature. About how the world is made. Plants and mountains and the moon. And we are making nature still. The arts, invention and industry are the latest stages in our natural progress.

*A man enters – William Blake.*

**Johnson:** Ah, meet the young man who will carry out the engravings of Josiah's Portland Vase for your poem. I am told that he is capable of doing anything well. Erasmus Darwin. William Blake.

*Darwin goes back into his coach.*

**Narrator:** Eighty thousand words. The Big Bang. The creation of the earth. The possibilities of extracting oil. His model of the earth's strata was the best for many years to come. And his model of the atmosphere was even better. The second region, in his three tier model, ended at thirty

seven miles, he said. Now we know that the stratosphere ends at thirty six miles. And it wasn't until the 1960's that his belief that there is an outermost atmosphere of hydrogen was proved to be right. He recognised weather fronts, suggested weather maps and explained how clouds form. All while eating cheese and treating patients. An unbelievable feat of reasoned imagination and a chaotic embrace of the lunar spirit.

***The Lichfield Ladies.***

**B:** Well of course it is wonderful beyond belief.

**A:** What does Mr Walpole say again?

**D:** *Reading from a paper.* 'Dr Darwin has destroyed my admiration for any poetry but his own. The twelve verses that by miracle describe and comprehend the creation of the Universe out of chaos, are in my opinion the most sublime passage in any author, or in any of the few languages with which I am acquainted'.

**A:** Walter Scott says that this will ensure Darwin a ranking among British poets of the highest class.

**D:** And Mr Cowper says of the wooing of Jupiter by Juno that no description in all our poetry has ever been more exquisitely finished.

**B:** Such a shame I have no illness I can take to him. Can you imagine having your pulse taken by such a poetic man.

**C:** But can you all not see what the poem is about? Can you not see what he is saying?

**B:** Of course we can.

**C:** What then?

**A:** It's about.....well it's..... it's a poem.

**D:** And poems speak for themselves.

**B:** Exactly. By being beautiful. Which this is.



**A:** Exquisite.

**D:** Delightful.

**B:** What more do you want?

**C:** He is saying that the universe is entirely material. That it is an active entity. That it displays life in ever changing combinations. There is no God in this poem. Doctor Darwin may be viewed as the greatest poet in the land, but he is also declaring his atheism.

*Burke and his lackeys march through the space again.*

**Burke:** We must keep up the attack. This damned Darwin with his popular poem. Half the ladies of England are quoting his lines glorifying the revolution.

**Lackey A:** Touch'd by the patriot-flame, he rent amazed  
The flimsy bonds, and round and round him gazed.

**Burke:** I know! I know!

**Lackey B:** And his attack on the slave trade is being much quoted.

**A:** When Avarice, shrouded in Religion's robe,  
Sail'd to the West, and slaughter'd half the globe.

**Burke:** Yes! I have read it. These damned intellectuals and so called philosophers.  
Setting up their little debating societies.

**B:** Darwin has started one up in Derby.

**A:** They have set out a manifesto which has been presented to the French National Assembly.

**Burke:** Jacobins, Jacobins everywhere. And none are worse than these scientists, trying to use God's work against us all. They consider man in their experiments no more than they do mice in an air pump. I presume you have heard that Priestley has been made an honorary French citizen.

**B:** His son has applied for citizenship there..

**A:** Watt's too.

**B:** And Wedgwood's.

**Burke:** I know. The eyes of the Ministry are upon them. Come we must continue to rouse the mob and jab at these philosophers pomposity.

*Wedgwood and Darwin are sitting on a rotating couch. Wedgwood is reading from a paper.*

**Wedgwood:** Have you seen this?

**Darwin:** It's not without merit.

**Wedgwood:** It's despicable. If they want to argue then they should come out and do it face to face, rather than resort to ridicule from a faceless pen.

**Darwin:** You sound like a pugilist.

**Wedgwood:** The Golden Age. A poetical epistle by Erasmus Darwin to Thomas Beddoes.

**Darwin:** I always told Beddoes that imagining a time when vegetables could be adapted to grow animal products was somewhat extreme.

**Wedgwood:** It looks forward to the day when we can pick beef off of trees.

**Darwin:** Never mind. I am more concerned with his work to see if the inhalation of gases can help chest diseases. I told him to go to Bath. He'll find more wealthy patients there.

**Wedgwood:** James is designing new apparatus for him to manufacture unpolluted gases in bulk.

**Darwin:** I shall try it as soon as I can. All this progress over the years Josiah and what do I proscribe? Bone ash. Powder of bark. Opium. I want to envisage the improvement of society through medicine rather than politics and yet there are so many times when I can do nothing.

**Wedgwood:** What do you think of Jenner's smallpox vaccinations?

**Darwin:** That it is revolutionary. I shall suggest that all children should be christened and vaccinated at the same time. Make the visit worthwhile. So what do you think of my rotative couch?

**Wedgwood:** It is very relaxing.

**Darwin:** Watt has designed it for me. I am interested in the therapeutic use of centrifugation.

**Wedgwood:** I presume he told you how furious he is with his son. Allying himself so closely with the Jacobin cause at a time when his patent issues are unresolved.

**Darwin:** This revolution is taking over everything. Science has given way to politics. Everything is soaked in this one event.

**Wedgwood:** Burke threw a dagger on the floor of the house declaring it was part of a Birmingham arms shipment for the French government.

**Darwin:** Are we old men in danger?

**Wedgwood:** Reform and Revolution have become synonymous Erasmus. They are transporting good men for no reason. Maybe you will end up in Botany Bay with all your beloved plants.

**Darwin:** If the French do invade then we will all be arrested.

**Wedgwood:** What is happening in France is incompatible with the happiness of mankind. It is Terror. That is all. You can never build a just society through force. Only reason will triumph.

*They rotate for a while. Darwin takes a book from his pocket.*

**Darwin:** I received a book today. From Joseph. Experiments on the Generation of Air from Water.

**Wedgwood:** You told him that it wasn't a single element.

**Darwin:** It is dedicated to us all, saying our small society has 'both encouraged and enlightened me'.

**Wedgwood:** I miss him.

**Darwin:** He is safer in America.

**Wedgwood:** Have you thought about moving there?

**Darwin:** Yes. Public affairs here are so dismal. Even my neighbour is a government spy. It feels as though everything is being smothered. That we are returning to glorifying ignorance and credulity. It is a disease. And how are you?

**Wedgwood:** My heart is not strong.

**Darwin:** I will give you more nutmeg. And powdered rhubarb.

**Wedgwood:** If I ever found myself fading quickly and in pain, would you be able to help me? To sleep soundly. If there was no hope.

**Darwin:** Yes. Laudanum.

**Wedgwood:** And your son and my daughter. They will marry.

**Darwin:** They will.

**Wedgwood:** I just pray I live long enough to see it.

**Darwin:** You will.

**Wedgwood:** We have done so much.

**Darwin:** And will carry on doing so.

**Wedgwood:** I wanted to surprise the world with wonders.

**Darwin:** And you have.

**Wedgwood:** And how is your medical book Erasmus? Will it ever be finished?

**Darwin:** Oh yes.

**Wedgwood:** Is it good? Is it what you wanted?

**Darwin:** I have kept quiet for twenty four years ever since I retreated under the threat of a poorly poetical Canon and painted over a motto on my carriage. But now I am too old and hardened to fear a little abuse.

**Wedgwood:** Good.

*They rotate in silence for a while. The Narrator comes forward and takes the book from Darwin. The lights fade on the rotating couch.*

**Narrator:** The book. The last Priestley published in England before emigrating to America. And inside two bills. A spur.

Wedgwood died in his sleep. After saying farewell to all of his family. And Robert Darwin and Susannah Wedgwood married.

*The publisher – Joseph Johnson.*

**Johnson:** It weighs four pounds. And it's only Volume One. Please tell me Volume Two is lighter.

**Darwin:** It's heavier.

**Johnson:** I must be mad.

**Darwin:** It took twenty years. That is only three point two ounces per year.

**Johnson:** And who will buy it? I cannot imagine the Society Ladies of Lichfield sitting around discussing essays on saliva and the oxygenation of blood.

**Darwin:** It is a medical book. I simply aim to reduce the facts belonging to animal life into classes, orders, genera, and species; and by comparing them to each other, to unravel the theory of diseases.

**Johnson:** Is that all?

**Darwin:** And then to classify every illness known to man and the methods by which it may be remedied. Volume Two.

**Johnson:** Another best seller. Maybe I can get Blake back to do an engraving of a woman with (*reading from the book*) an arterial haemorrhage.

**Darwin:** We flounder us physicians. We roam the world in our carriages and we flounder. I cannot count the number who have built their reputation on the correct pronunciation of a death sentence. What kind of medicine is that? I have seen my first wife die, my friends die, my friends children die, my own children die and have been able to do nothing. My own son Henry was only twelve months old and all I could do was bleed him.

**Johnson:** Alright. I will publish. I presume that there is nothing here that will cause me to be imprisoned.

*Burke and his lackeys.*

**Burke:** Zoonomia.

**A:** Or The Laws of Organic Life.

**B:** Volume 1.

**A:** The European Magazine says that it 'bids fair to do for Medicine what Sir Isaac Newton's Principia has done for Natural Philosophy'.

**B:** The Monthly Magazine has called it 'one of the most important productions of the age'.

**A:** Thomas Beddoes says it 'will place the author amongst the greatest of mankind, the founders of sciences'

**Burke:** Don't mention that obnoxious man with his gas and beef.

**B:** It was us that came up with the beef idea.

**Burke:** Oh yes. And you've all read it?

**A:** As you instructed.

**Burke:** All of it?

**B:** Yes.

**Burke:** And?

**A:** It is very thorough.

**Burke:** And it is a medical book?

**B:** Yes.

**Burke:** Good. Maybe he has learnt from what happened to his friend Priestley and will do no more harm. I cannot imagine that a medical book is likely to provoke any revolutionary sympathy.

**A:** Actually sir there is something you should look at.

**B:** Yes. With great urgency.

**Burke:** What are you on about?

**A:** Chapter Thirty Nine.

**Narrator:** Chapter Thirty Nine. 'On Generation'. 'I am too old and hardened to fear a little abuse'. *Looks as the bills again.* May 16<sup>th</sup> 1770. For painting a motto onto the carriage of Dr Darwin. 5d. Twenty five years ago from this moment in our narrative.

*The Painter arrives. (This is a replay of the scene near the beginning of the show but is now extended)*

**Painter:** Morning Mr Darwin.

**Darwin:** Good morning Mr Shaw. I have a job for you. I would like you to paint this on the side of my carriage.

**Painter:** E Conchis Omnia. What does that mean then?

**Darwin:** Everything from shells. Or rather shellfish. Or rather infinitesimal creatures from the sea. But as my family arms are three scallop shells, shells will do.

**Painter:** Yes Doctor Darwin.

**Darwin:** It doesn't offend you?

**Painter:** Well I don't really understand what you're saying.

**Darwin:** I am saying that we are not created by God in his image. I am saying life, all life, has descended from one microscopic ancestor, from a single living filament.

**Narrator:** Erasmus Darwin. Born here, right here. Doctor and poet. E Conchis Omnia. A moment of revelation, developed, expanded. To become the first theory of common descent.

*Burke standing at a podium. The lackeys sitting behind a desk. A large crowd, jeering. Darwin's speeches are made from another area.*

**Burke:** *Waving a book.* Zoonomia! How can all animals undergo perpetual transformations? We all know that the more biological research proves that there must have been a designer.

**Voice from crowd:** God!

*Crowd cheer their assent.*

**Burke:** Exactly. *Holds up another book – Bishop Paley's Evidences of Christianity* Bishop Paley has provided irrefutable proof that the very facts of science bear witness to the activity of a supreme deity. Let us read what he says of the eye. *Reads* The transparency of the cornea, the precision of the lens, and the adjustability of the pupil. They all co-operate to serve vision. The marks of design are too strong to be gotten over. Design must have a designer. That designer must be a person. That designer is..

**Crowd:** God!



**Burke:** And here we have this...this.... atheist! This agent of the devil! This friend of the king murdering French! Declaring that all animals – all animals – have changed their forms. And that they have changed them not because of God’s desires, but because of security, hunger and lust!

*Outrage in the crowd.*

*Lights up on Darwin again.*

**Darwin:** Some birds have acquired harder beaks to crack nuts, as the parrot. Others have acquired beaks adapted to break the harder seeds, as sparrows. Would it too bold to imagine that all warm-blooded animals have arisen from one living filament endowed with animality with the power of acquiring new parts and possessing the faculty of continuing to improve by its own inherent activity, and of delivering down those improvements by generation to its posterity, world without end!

**Burke:** When will Mr Darwin climb down from his perch and accept his place in the great chain of being! We live in dangerous times, surrounded by dangerous men. Let us never forget where these so called scientific theories and men of science would lead us. Anarchy. Equality. Idleness. Misery.

*Huge jeers from around the whole of the playing area.*

*A window opens and his mother appears.*

**Mother:** So you have finally finished your book then.

**Darwin:** Yes mother.

**Mother:** I’m glad. And your brother tells me that the King has asked you to become his personal physician.

**Darwin:** Yes.

**Mother:** You’ve made me very proud. When do you start?

**Darwin:** I have declined. Neither myself or Eliza desire a move to London.

**Mother:** Well that’s a pity. Everybody here is talking about it.

**Darwin:** How is Elston?

**Mother:** We are all fine. John's congregation seems to grow year by year and Robert potters about. Although there's been a bit of fuss since the fields have been enclosed. Some have lost out and don't like it. And we've lost a lot of the old names too, which is a shame. Barley Bush Furlong and Little Cowpits, they've all gone. Do you remember playing there?

**Darwin:** Yes mother. A long time ago.

**Mother:** Yes, it was. Goodbye Erasmus, you've done very well for yourself. You seem to be very popular.

*She shuts the window.*

*Lights up on a line of cartoonists working away, their easels facing away so that we cannot see their work. Burke is pacing along the line followed by his lackeys.*

**Burke:** No. No. No. No. Yes. Good.

*He takes the cartoon and shows it to the others.*

**Burke:** Look. Darwin as an ape carrying a basket marked Zoonomia or Jacobin Plants.

**A** Very good.

**Burke:** Is the poem ready for publication?

**B:** Yes.

**A:** It's called 'The Love of the Triangles'.

**Burke:** Go on.

**B:** It proves that it is demonstrable that humanity has risen entirely by its own energies from the cabbages of the field to our present state of existence.

**Burke:** Excellent. We shall destroy the reputation of Dr Darwin once and for all. Canning has some particularly fine words to pronounce.

*Lights up on Canning.*

**Narrator:** George Canning. Later to be Prime Minister.

**Canning:** This is a man who prides himself on reason and who yet declares these three things. That mountains are older than the bible!

*Laughter.*

**Canning:** That human beings have evolved from lower forms of life.

*Laughter.*

**Canning:** And that one day we will all benefit from the practical applications of this thing called electricity.

*Laughter.*

**Canning:** Oh gentlemen! What kind of fool is this?

*Lunar Group – Boulton, Watt, Keir, Edgeworth, Darwin.*

**Darwin:** Friends; in a few moments time our century will have ended and a new one will begin. We will enter it having made huge advances over the one that lay before us, and we know that it will hold amazing things that we cannot even dream of. We may enter it stuttering, besieged by war and by ignorance and by superstition. But let us say this. Science is not the enemy of mankind but its liberator. Those that declare otherwise, those that would rather we stood in awe at the beauty of creation and bowed our heads in supplication rather than looking into her secrets, are those that deny progress. And progress is the most natural state of all things.  
To science and friendship!

**All:** To science and friendship!

*Lights up on Burke.*

**Burke:** This is a time for loyalty! For protection. For justice and obedience. For morality and security. We are a great country and we have not crumbled like some under these ever desperate

calls for reason, for philosophy, for peace and fraternity. Because we realise where they would lead us. To anarchy! To treachery! To idleness and famine! To national and private ruin! And to misery!

*A huge cheer.*

*The Publisher – Joseph Johnson – and Darwin. Darwin’s coach is nearby.*

**Johnson:** I want you to change the name. I think that *The Origin of Society* is simply too provocative.

**Darwin:** Nonsense.

**Johnson:** You have not been imprisoned like I have. For selling a pamphlet.

**Darwin:** I told you not to dabble with Unitarians.

**Johnson:** I do not think that people will like to be portrayed as descendants of a microscopic speck.

**Darwin:** It is a poem.

**Johnson:** ‘First forms minute, unseen by spheric glass  
Move on the mud, or pierce the watery mass;  
These, as successive generations bloom,  
New powers acquire and larger limbs assume;  
Whence countless groups of vegetation spring,  
And breathing realms of fin, and feet, and wing’.

Do you know how dangerous it is for me to publish these? And the notes again. They are so long. One hundred and twenty pages.

**Darwin:** Mr Johnson the printed scientific word has strangled the monstrous births of superstitious ignorance; and scatter’d among the great mass of mankind the happy contagion of science and truth. We must hold firm.

**Johnson:** Alright. But I fear that you will be attacked more savagely than even you believe.

**Darwin:** I am ready. By the way did I tell you that I'm thinking of making some more improvements to my coach. I shall ask Mr Edgeworth for his opinion. And maybe I should have that motto painted back on. What do you think? Drive round Lichfield and see if the Canon is still there.

*Darwin gets into his coach which we see moving again. Lights up on the Narrator who says the following as the lights slowly fade on the coach and Darwin who is writing a letter.*

**Narrator:** On the 18<sup>th</sup> of April, 1802 Erasmus Darwin 'was seized with a violent shivering fit, and went into the kitchen to warm himself. He returned to his study, lay on the sofa, became faint and cold, and was moved into an arm-chair, where without pain or emotion of any kind he expired a little before nine o'clock'.

He had been half way through a letter to his mechanical friend Richard Edgeworth.

### *Burke and the Lackeys*

**Burke:** Within this odious poem, 'The Temple of Nature', there is a total denial of any interference of a Deity.

**A:** Doctor Darwin is trying to substitute the religion of nature for the religion of the Bible.

**B:** This is glaringly atheistical.

**Burke:** Doctor Darwin suggests that man has progressed from an orangutang state – so contrary to all history, to all religion, nay to all possibility.

**Narrator:** He was buried at Breadsall church. His memorial inscription reads 'Of the rare union of talents which so eminently distinguished him as a physician, a poet and philosopher his writings remain a public and unfading testimony'. But they did fade; like the Lunar spirit.

*Over the following section we see gently fading pools of light illuminating the five men – Priestley; Boulton; Watt; Edgeworth; Keir – who are working still.*

**Narrator:** Priestley dying in 1804. Boulton in 1809, his Soho manufactory still a triumph and now making coins for the Royal Mint. Edgeworth in 1817, inventing to the last; Watt in 1819, hailed, in his memorial at Westminster Abbey, as one of 'the most illustrious followers of science and

benefactors of the world'. And Keir in 1820 taking with him to the grave the secret of his alkali process that had made him rich.

*A bookshelf appears.*

**Narrator:** E Conchis Omnia. Everything from shells. A motto on a carriage. But not just on a carriage, but on a bookplate too.

*Shows the book – we see this bookplate on the screen.*

**Narrator:** Made by Erasmus. Copied by his son Robert who pasted them into his library. A cautious and quiet man. A Doctor. Married to Wedgwood's daughter. With whom he had a son called Charles.

*We see a young man enter and pick up a book.*

*At the same time we see Edgeworth opening a letter and placing his head in his hands.*

**Edgeworth:** Erasmus is dead.

*A woman comes in to comfort Edgeworth.*

**Narrator:** This has been a story with many characters, many players. And now we add the final two. Edgeworth's wife, married to an energetic young naval officer with a taste for science.

*Lights up on Francis Beaufort in a naval uniform who walks across to the young man who is holding the book.*

**Beaufort:** Mr Darwin?

**Charles:** Yes.

**Beaufort:** May I introduce myself. Francis Beaufort. I am organising a much needed project for updating charts world-wide and am about to send a ship on a round the world voyage. I am looking for a naturalist.

**Charles:** I am not sure if I am qualified for such an honour.

**Beaufort:** Well you have been recommended and I would dearly love you to join us. My good friend and brother in law Mr Richard Edgeworth always spoke highly of your grandfather and showed me many of the letters they shared detailing their scientific investigations.

**Charles:** My grandfather?

**Beaufort:** Yes. I have just finished working on one of his inventions that Richard left me a sketch of.

*He takes from his pocket the wind up bird.*

**Beaufort:** He calls it an Artificial Goose.

**Charles:** Does it work?

**Beaufort:** Try it.

*Darwin takes the bird and they both watch it fly away.*

**Charles:** I would be honoured to join you sir. Can I ask the name of the ship?

**Beaufort:** The H.M.S Beagle.

*And now the sound of the sea builds up and a ship is created across the whole of the playing space. All of the cast come to join in with the crew, with the Lunar Men in prominent positions.*

**Narrator:** And that is the end of my story.

**All:** Dare to know my friends. Dare to know!

*Some kind of pyrotechnic finale – another explosion of light and sparks.*

*Darkness.*

Fin