



World Building

Imaginary Landscapes and Literary Worlds

World Building

World Building is the process of constructing an imaginary world, sometimes associated with a whole fictional universe*

Wikipedia

- Term first used in 1820
 - First used in the *Edinburgh Review* in December 1820
 - Probably from childhood and related to fairy story, myth, legend etc.
 - Most distinguished academic use
 - Arthur Eddington's *Space Time and Gravitation: An Outline of the General Relativity Theory* (1920) to describe the thinking out of hypothetical worlds with different physical laws
- In literature thought to apply mostly to Fantasy, Sci-fi and Horror writing
 - Branch of building an imaginary landscape
 - Which applies to all novels and many short stories

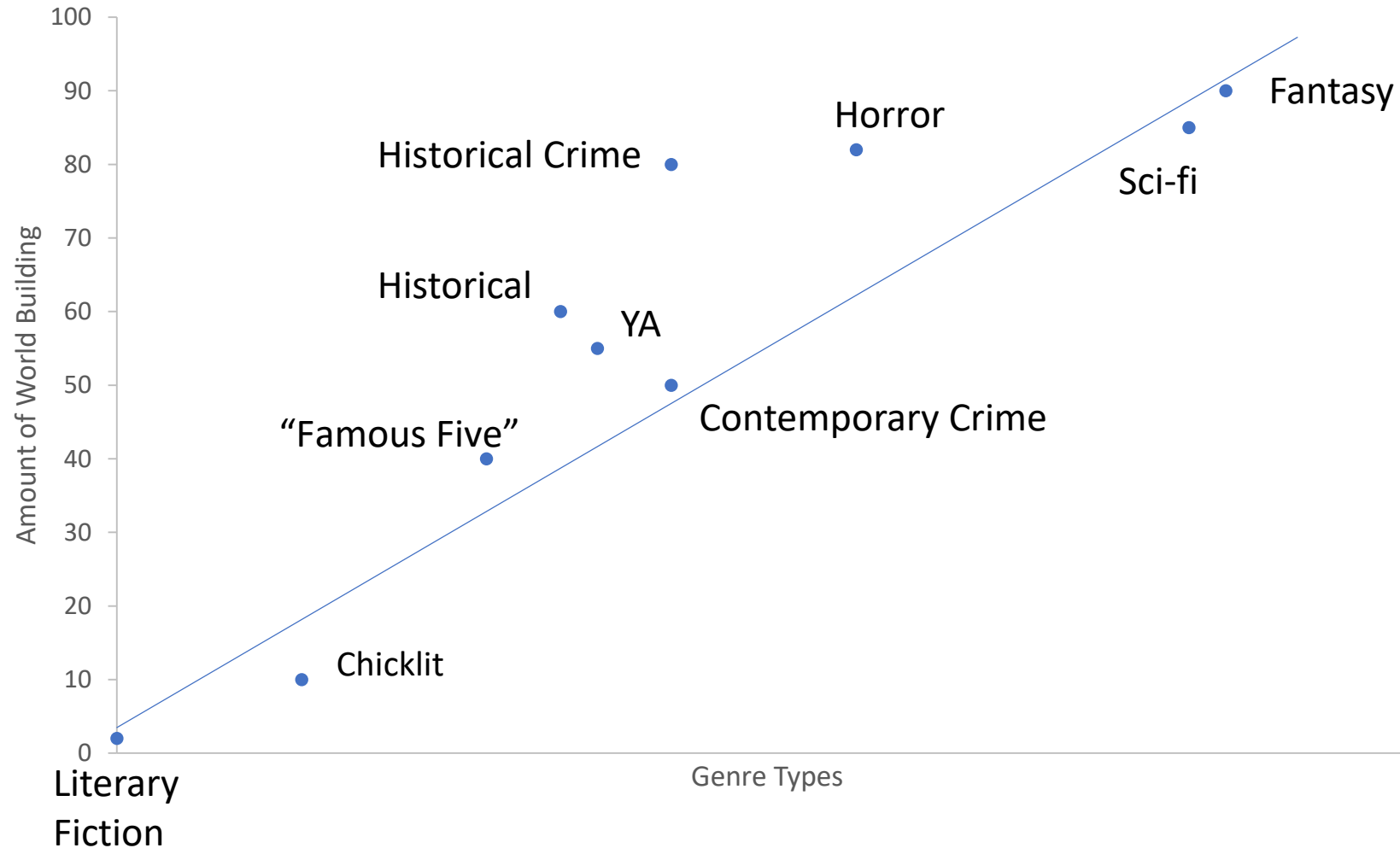
Discussion 1

Is there any form of literature that does not require World Building or devising an imaginary landscape?

World Building

- Which genres of fiction need world building and which don't?
 - Do: Fantasy, Science Fiction, Horror
 - These depend on a setting where normal boundaries of the world are expanded
 - Don't: Literary fiction, Erotic, Contemporary Crime Fiction
 - Set in the world we live in. The boundaries of the world we know are fine
 - But what about
 - Historical Fiction: How do we know how people react to each other, how they thought or about practical things like how the world smells or tastes
 - Crime Fiction: What's it like to be a murderer, motives, morality, etc.
 - Children's Books: YA can be very inventive, "Famous Five" likewise

A Graduated scale of World Building



Definitions of World Building

World Building

- Two methods of literary world building
 - Top down (Outside-in)
 - Write an overall story plan and then fill in the details of the world to fit the needs of the story
 - Bottom up (Inside-out)
 - Create the world from principles and see where it leads
 - Not as common

What rules can be used?

- Rules which come from science
 - The laws of physics we live under
 - What we know about biology and evolution
 - What we know about what it's like to be human
- Magic
 - Things that can't be done under natural scientific laws
 - Flying on broomsticks in a game of Quidditch
 - Faster than light space travel
- Extensions of science
 - Kazu Ishiguro's novel *Never Let Me Go*
 - Cloning to produce individuals used to be harvested for spare organs
 - *Never Let Me Go* is not a sci-fi novel but a novel of social commentary

Discussion 2

What areas of an imaginary world or landscape have to be controlled?

What's needed to build a world?

- Physical Frame
 - Land, sea, weather, climate, etc.
 - Planets, solar systems, stars, galaxies etc.
- Plants (Flora)
 - Single cell, Nonflowering Plants, Flowering Plants
- Animals (Fauna)
 - Carnivores, Herbivores, Omnivores
 - Vertebrates, Arthropods, Cephalopods
- Intelligent life
 - Highly complex
 - Language, culture.
 - Cities and technology

What rules can be used?

Whatever rules you use they

MUST

be consistent

Building the physical world

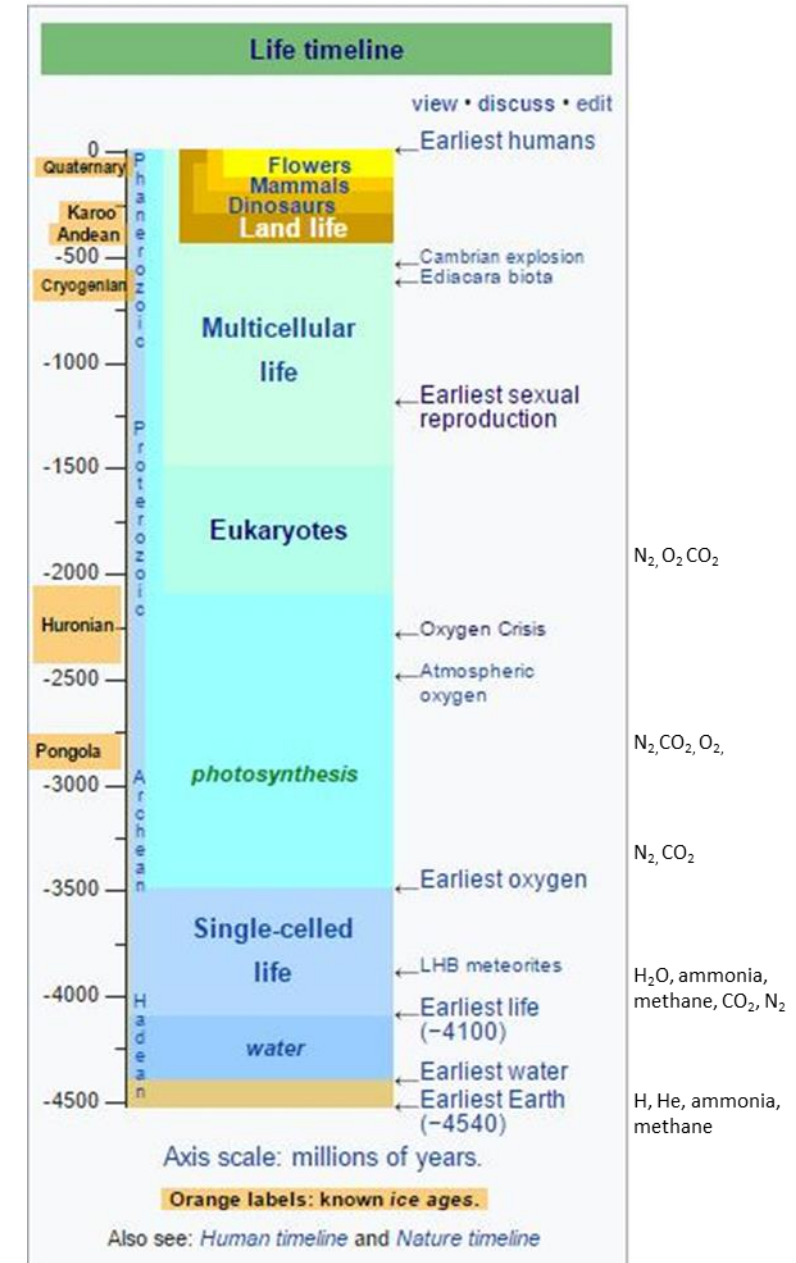
Toto, I've a feeling we're not in Kansas any more

The physical frame of the world

- Land
 - Mountains, hills, volcanoes, earthquakes, seas, rivers, streams, canyons
 - Seas have similar features e.g. deep trenches, mid-ocean ridges, shallows
- Atmospherics
 - Weather, seasons, visibility, storms, hurricanes, gases in the atmosphere
- Climate
 - Hot, dry, wet, cold, icy, dark all the time
- Sky
 - Suns, moons, sister planets

Building atmosphere

- Atmosphere is essential to the reader of any book
 - Without the atmosphere generated by our characters there is no drama
 - Without an atmosphere on our planet there's no one to play out the drama
- Creating the atmosphere
 - Gases from volcanoes and rocks giving CO₂, H₂
 - H₂O available after 500 million years
 - Single cell plant converting CO₂ to H₂O
 - After another 500 million years
- Thank a plant every day you can breathe



Discussion 3

Enceladus is an ice covered moon of Saturn which has complex carbon molecules in its liquid water ocean.

NASA's recent Cassini probe, by sampling guizers of water ejected into space at the moon's south poles has shown that Enceladus appears to have all the conditions required for life, rather like the Black Smokers on the bottom of some of earth's oceans.

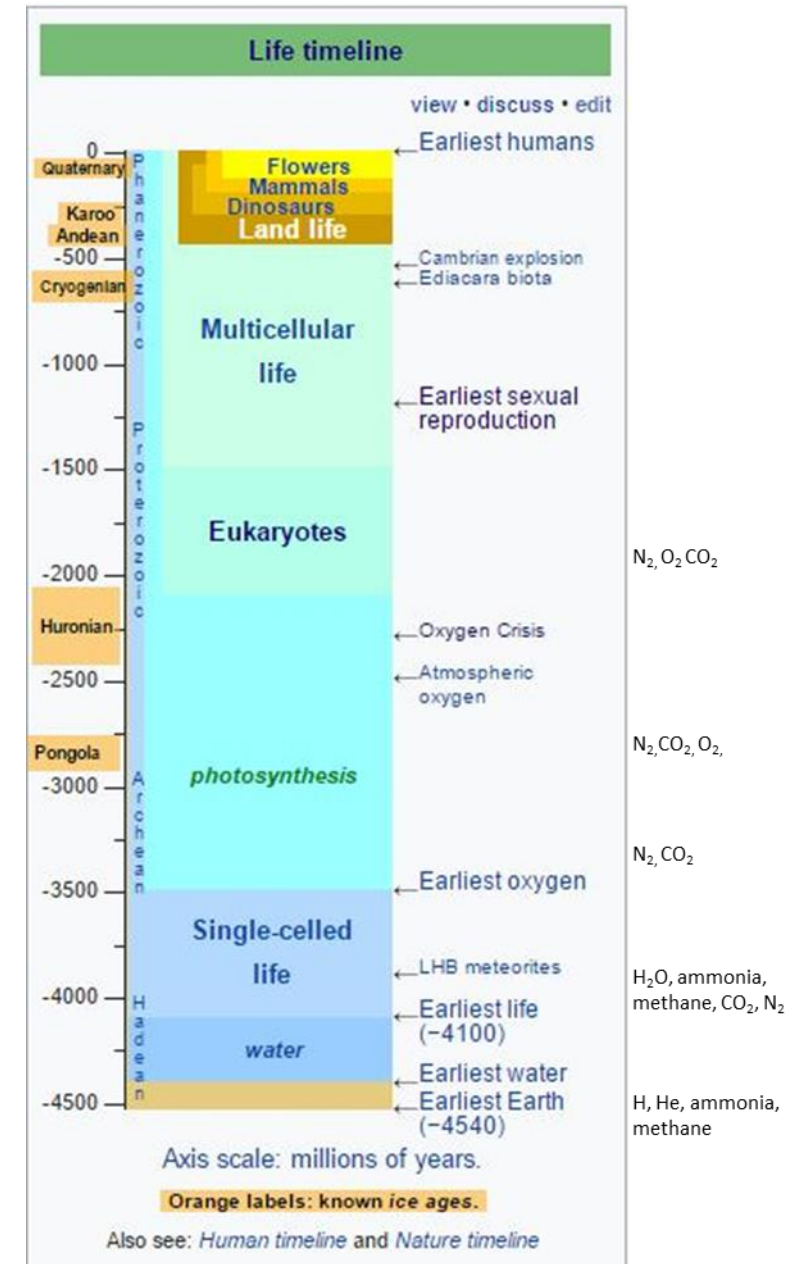
Imagine what creatures might be living there.

Building the world of flora

Not just born to be eaten

DNA and Multicellular life

- At about 2.0 billion years ago
 - Single-celled creatures, the Eukaryotes, emerged
 - They contained DNA
- By about 1.5 billion years ago
 - Multi-celled creatures had emerged
- At about 5 million years ago
 - The first complex creatures
 - Using sexual reproduction with DNA
 - Started to dominate life
- The Cambrian Period had started
 - Plants on land



Plants

- The majority of plants are green
 - Don't use green light so they look green
 - Eat carbon dioxide, excrete oxygen
- Cambrian Forests
 - Clubmosses, spikeworts, horsetails, ferns, ginkgo trees
 - Naked seeds or spores only
- Palaeocene Forest
 - Flowering plants dominate
 - Grasses, conifers, leafed trees,
 - All have covered seeds i.e. fruit



Discussion 4

Authors have played with the idea of plants being able to attack people.

The most famous case is the Triffids in *The Day of the Triffids* by John Wyndam.

Less famous but perhaps more ingenious are the plants in Larry Niven's *Ringworld* which reflect focused rays of sunlight to destroy competitor plants around them, as well as occasionally attacking people.

What sort of plants would you like to evolve on your worlds?

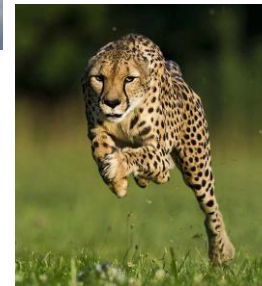
Building the world of fauna

Born to eat plants or each other

Animal Characteristics

Propulsion

- Aquatic
 - Sleek, hydrodynamic bodies
 - Fins, tails
 - Water jets
- Air
 - Wings: Feathered, Skin, Membrane
 - Gliding
 - Flapping
- Land
 - Legs: None, two, four, multiple
 - Climbing: two legs, two hands
 - Running and Walking: two or four legs
 - Slithering: no legs



Animal Evolutionary Choices

- Is bigger better?
 - Safer because you're difficult to eat but you can't run away as fast
 - Require an enormous amount of food
 - Works best if you're enormous
 - But beware clever predators, whales were safe until humans arrived
- Senses?
 - Sight, smell, taste, touch, hearing we know about
 - Electric sense is used by fish, especially those that also have ultra good taste and smell, like the shark, to find prey
 - Live in water

Animal Evolutionary Choices

- Live in difficult environments?
 - Less competition
 - Become a niche operator – cheetahs are very fast
 - Beware becoming too specialised – cheetahs are too small to defend themselves from lions to keep the prey they have killed
- Live in a single creature environment
 - If everyone is the same then no one will eat you or you'll eat everyone
 - Everyone will have to develop specialisms
 - So even if the world has only spiders, there will be some spiders that are carnivores and some that are herbivores

Discussion 5

Imagine a mother reminding a child about what to look out for before he goes to play in the local park or to swim in the sea with friends

Now imagine her advice if earth had a higher atmospheric oxygen concentration of about 30% rather than our current 20%

What might change?

Worlds with intelligent life

It's life Jim but not as we know it.

Intelligent Life

- Lots of ways a living organism can display intelligence
 - Sophisticated use of tools
 - Including manipulation of life for specific purposes
 - Philosophical or religious beliefs
 - Talking animals in C S Lewis' *Narnia* stories
 - Construction of art
 - Poetry by the Rabbits of Threarah's warren in *Watership Down* by Richard Adams

The apotheosis of the City

- In many stories the motif of the city is a true apotheosis
 - Because it can be argued to be the most complex invention of humankind
 - It produces the greatest stage for conflict and drama
- Humankind expresses itself most fully in the construction of a city
 - They collect people and different races
 - True melting pots
 - They are places of drama and stress
 - Raymond Chandler's character Phillip Marlowe can only walk down a city's mean streets
 - There is emotion, empathy and morality at play
 - What better place for love to be expressed and tested
 - Political intrigue
 - Assassination and the city go together

New Crobuzon on Bas-Lag



New Crobuzon on Bas-Lag

- **New Crobuzon on Bas-Lag**

- **Kepri:** a race of humanoid scarab beetles, the females have humanoid bodies
- **Cactacae:** towering humanoid cacti; they grow from the ground with sap for blood
- **Garuda:** humanoid birds of prey from the deserts
- **Wrymen:** semi-intelligent flying creatures like gargoyles
- **Voydonoi:** frog like water creatures that can fashion solid objects out of water
- **Weavers:** multidimensional spiders that regard Bas-Lag as an ongoing work of art

- How the races interact is a great part of New Crobuzon's creative power

- The plot is high in tension and the pace driving
- The technology is basically Steam-punk
- Magic called thaumaturgy exists on Bas-Lag



Kepri



Cactacae



Wryman



Garuda



Voydonoi

Weaver



New Crobuzon on Bas-Lag



- Remade
 - Criminals
 - Genetically altered
 - Fused with machinery
 - Often steam powered
 - The Man Canon
- Their alteration is the punishment for their crime
 - The beggar for coal
 - No real purpose for the remaking
 - Except as a warning not to beg
- Spontaneous Life form
 - Construct Council
 - Made from fusion of domestic robots on the city's rubbish dump



Heron Fleet: A community not a city

- This is an agrarian community in a post globally warmed world
 - Human inhabitants, no aliens
 - Democratic and apparently socially liberal
 - Only same sex relationships are allowed
 - All babies born by artificial insemination
- This is a community that produces social and political questions
 - Backstory had to be elaborated
 - Contrast with the scavenger gangs in what is left of the cities
 - Future vs past plot



Trantor and Terminus

Isaac Asimov's Foundation Series



Trantor and Terminus

- **Trantor**

- It is the capital city and administrative hub of the Galactic Empire
- It is a specialised planet being supplied by other parts of the Empire: produces no food or raw materials itself
- It has more than a passing relationship to Rome
- It is a subterranean city covered entirely in metal structures except for the park around the Emperor's palace
- The inhabitants of the Empire are human



Trantor and Terminus



- **Terminus**

- A planet on the fringes of the galaxy
 - A planet at the opposite end of the galaxy to Trantor
 - Agrarian community growing its own food
 - Trades for other materials it lacks with other planets
 - Well out of the hurly burly of the centre of the galaxy where the stars stop
 - Home of the *Foundation*
 - Who will bring about a new empire
- Terminus is the polar opposite to Trantor

Trantor and Terminus

- The planets are really cities written large
- They may appear very different but in fact are very familiar
 - The worlds are dominated by humans
 - The technologies used are not very advanced
 - Not surprising in that it was written in the 1950's
 - The books are written after WWII
- Central conflict
 - How will the dark ages between the death of the existing Empire and the creation of a new Empire be minimised?
 - Empire is desirable as a statement of stability

Trantor and Terminus

- Characters are similarly familiar:
 - Hari Seldon, inventor of psycho-history
 - Social mathematician
 - Along with the secret Second Foundation
 - The guardians of psycho-history
 - Who as the story goes forward turn out to be telepathic
 - Even the unexpected figure of the Mule
 - A telepathic freak who comes nearest to stopping Hari Seldon's dream
 - Cannot be stopped
- It's the politics of humans is the theme of the books
 - Foundation Series is a "political thriller" dressed up as space opera
 - In this case books provide an interesting but not a radical stage for considering change

Discussion 6

Imagine Manchester or another large city divided

- Bezel and Ul Qoma in China Mieville's *The City and the City*
- Divided by a wall like Berlin before German reunification
- Class or racial divide as in *To Kill a Mocking Bird*

How would you set Romeo and Juliet in such a divided city or similar community?

Questions

Summation

When a reader opens a book she enters into a contract with the writer and the writer's only job is to stay true to the world as established

Angela Carter

