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NARRATIVES

The novella *Son of the Thundercloud* (NR1) tells of a time when people forgot their traditional stories:

- When I first came to live here the earth was green and fertile ... There were storytellers who went all over the land telling stories to the people, and spreading joy and hope ... But when the storytellers were killed, one after another, the people slowly forgot what they had been told ... and allowed their minds to accept the darkness. So the drought came as a result of people rejecting the joyful stories and accepting the dark stories. (NR1:43–44)

The novella is by Easterine Kire, an award-winning author from the Angami ethnic group in Nagaland, North East India. It is easy to see the joyful stories in the extract above as the traditional narratives of oral cultures that pass on knowledge to future generations about how to live sustainably in the local environment (Abram 1996), and the dark stories as the stories of industrial civilisation that cause people to be overtaken by greed and destroy the environment.

Son of the Thundercloud draws on Naga legends and presents these traditional narratives in a form that speaks to current generations about the ecological issues we are facing (Das 2019). It is a rich, mythic tale that makes use of a modified form of the classic ‘hero’s journey’ structure (Bloom and Hobby 2009) in which the main character, Pele, is forced to leave his village due to drought and famine, and begin a journey of discovery and transformation. There is one theme which links together all the events on the journey: water, ‘the purest form of life you can find’ (NR1:141). At the start there is a terrible drought that lasts hundreds of years; then rapid ecological

restoration when the rain returns. There is a river the villagers call ‘mother’ because it provides food; a ‘monster rainstorm that ruined houses and fields’ (p. 140), and the son of the thundercloud himself who was conceived by a raindrop. The tale links water with the fertility and flourishing of humans and ecosystems, with climate change and with culture. And it has a clear message, that when traditional culture is ignored, and people are greedy or filled with hate, ecological disaster will occur. What makes the book so powerful is that it is structured as a *narrative* – a sequence of events which links causes with consequences and conveys messages for readers to draw out and infuse into their own lives.

Narrative is the most powerful form of story that this book describes. As Dahlstrom points out, narratives offer benefits in ‘motivation and interest, allocating cognitive resources, elaboration, and transfer into long-term memory. As such, narrative cognition is thought to represent the default mode of human thought, proving structure to reality’ (Dahlstrom 2014, p. 13615). Narratives can weave together characters, events and locations, ascribe intentions and motivations, link causes with effects, actions with consequences, and, importantly for ecological issues, convey ethics and ascribe blame. And they can do all this in ways that are inspiring, moving and memorable.

The terms *narrative*, *story*, *plot*, *fabula*, *narration* and *text* are used in different ways by different theorists, but it is common practice to separate the underlying structure of a narrative from its manifestation as particular texts. For the purposes of this book, the term *narrative structure* is used to represent the basic scaffold of events and connections between them:

Narrative structures are stories in people’s minds which involve a sequence of logically connected events.

Like the other kinds of story in this book, narrative structures are considered to be cognitive (Herman 2003), existing in the minds of individuals. They can also be widespread across the minds of multiple people as social cognition and play a role in shaping dominant worldviews. The term ‘sequence’ implies that the events have a temporal connection, and ‘event’ implies a location and characters who take action or have experiences (Toolan 2001). The logical connections may be explicit, or it may be left for readers to infer them in a process of narrative reasoning.

Narrative structures can be very simple. The following words by Greta Thunberg are based on a structure which contains just two events:

- A year and a half ago, I didn’t speak to anyone unless I really had to, but then I found a reason to speak. (EN24)

The events occur in a sequence and are logically connected through the opposition of not speaking, and then having a reason to speak (i.e., climate change).

In another speech, Thunberg uses the same narrative structure again, but with different words and slightly different details:

- Later on I was diagnosed with ... selective mutism. That basically means I only speak when I think it is necessary. Now is one of those moments. (EN25)

Every word of this, aside from ‘I’ and ‘speak’, is different, but it is still drawing on the same underlying structure of events and connections. This book uses the term *narrative texts* (following Bal 2017) to describe the texts that underlying structures manifest themselves in:

A *narrative text* is a specific oral telling, written work, or other expressive form, which recounts a series of temporally and logically connected events.

There are many types of narrative text, and Cohan and Shires (1988, p. 53) list only some of them: ‘novels, short stories, and films ... also newspapers, advertisements, histories, myths, letters, anecdotes, jokes, popular entertainments and public ceremonies’. Being cognitive rather than linguistic, narrative structures can also manifest themselves in other modes too, for example in visual images, gestures or music. For convenience (and to follow the convention), the term *narrative* is used in this book to refer to both narrative structures and to their manifestation in narrative texts.

Narrative structures can be simple, or they can be incredibly complex and intricate. They can appear transiently for a moment and then be forgotten or can be repeated so often that they echo across cultures and history. There is a particular narrative which folklorists call ATU328 ‘The Boy Steals the Ogre’s Treasure’. Using phylogenetic analysis, da Silva and Tehrani (2016) traced this narrative ‘deep into Indo-European prehistory’, going back several thousand years and appearing across a number of European cultures. The common fairy tale *Jack and the Beanstalk* has a structure which fits this narrative.

This book will indicate narrative structures using small capitals, e.g., JACK AND THE BEANSTALK. This is just a label (what Lakoff 1993, p. 209 calls a ‘mnemonic’) to stand for a cognitive structure. The structure is the basic framework of temporally and logically connected events that someone who ‘knows the story’ keeps in their minds. Of course, there can be different versions of a narrative, and memories are never perfect, so there is likely to be variation in the exact details that are stored in people’s minds. Nonetheless, it is possible to discuss *prototypical* narrative structures.

The prototypical narrative structure JACK AND THE BEANSTALK starts with Jack and his mother, poor and forced to sell their cow to survive. Jack instead exchanges the cow for magic beans, incurring the wrath of his mother who throws the beans out of the window. They grow into a huge beanstalk, which Jack climbs and finds a giant who plans to eat him. Jack steals the giant’s

treasure, kills him, becomes extremely rich and lives happily ever after. This is an abridged summary of the sequence of events contained in the narrative structure, and particular narrative texts will fill in the details. The narrative texts could be particular books, films, or live storytelling performances, although, as Hanne (1992) points out, the written forms are very different from the oral traditions that stretch through time. Joseph Jacobs's 1892 written text starts and ends as follows:

- [start] There was once upon a time a poor widow who had an only son named Jack, and a cow named Milky-White. (NR2:53)
- [end] Jack and his mother became very rich, and he married a great princess, and they lived happy ever after. (NR2:58)

The narrative text adds details which can be considered 'satellite' in the sense of not being crucial to the unfolding tale (Cohan and Shires 1988, p. 55). It does not matter what name the cow has, or whether Jack marries a princess or not, whereas 'kernel' events such as the growth of the beanstalk are essential to the progression of the narrative. The satellite elements, however, can be 'very important for the meaning and overall impact of the narrative', and can give 'a work its power and significance' (Abbott 2008, p. 23).

Of particular importance for ecolinguistics are the underlying messages or morals within narratives which can be extracted, taken outside the narrative itself, and applied to everyday life. These are called *narrative entailments* here and are considered part of the narrative structure in the same way that metaphorical entailments are part of the metaphorical structure.

In fairy tales, the narrative entailments are sometimes drawn out explicitly by the text. For example, *The Hare and the Hedgehog* states: 'The moral of this story is ... that no one, no matter how great he may be, should permit himself to jest at anyone beneath him' (Grimm 2011, p. 764). More often, though, the entailment is implicit, with hints and clues for messages readers should take away with them. As Merchant (2014, p. 78) points out, 'imagery found in a culture's literature can play a normative role within the culture. Controlling images operate as ethical restraints or as ethical sanctions – as subtle "oughts" or "ought not's"'.

Andrew Lang's version of *Jack and the Beanstalk* includes a fairy who gives a strong hint for the entailment readers should take away with them. The fairy tells Jack the following:

- You showed an inquiring mind, and great courage and enterprise, therefore you deserve to rise; and when you mounted the Beanstalk you climbed the Ladder of Fortune. (NR4:142)

The verticality metaphor (Cian 2017) here maps 'climbed' to 'enterprise'; 'rising' to 'success'; and 'ladder' to 'fortune' in a way that entrenches dominant stories of individual enterprise as a path to material gain.

While some entailments are explicitly drawn out and others are more subtly hinted at, readers can draw out entailments for themselves from any part of a narrative. In *JACK AND THE BEANSTALK* there are potential entailments that it is acceptable to steal from and harm people who are physically different and evil, that money brings happiness, etc. The potential narrative entailments available for the reader to draw out can be judged against the ecosophy of the analyst. The ecosophy of this book calls for wellbeing for all, and redistribution from rich to poor so that all can meet their needs as overall consumption massively decreases. There *is* redistribution in this narrative, but it is only from previously rich to newly rich, leaving the poverty of Jack's neighbours untouched and erased as an issue. As always, it is important to view the reader as being critical – able to selectively draw out entailments for themselves, and able to accept or reject entailments that the text is explicitly or subtly encouraging them to take.

McLaren (2002, p. 89) uses the expression 'the narratives we live by', which are the 'stories we tell ourselves about ourselves, stories which shape both the terror and ecstasies of our world'. He argues that 'if narratives give our lives meaning we need to understand what those narratives are and how they have come to exert such an influence on us' because 'narratives can become politically enabling of social transformation'. He therefore proposes a pedagogy he calls 'critical narratology' which involves a questioning of 'society's treasured stock of imperial or magisterial narratives' (p. 91).

A critical narratology would not attempt to ban cultural narratives such as *JACK AND THE BEANSTALK* – something which would be as undesirable as it is impossible. Instead it would encourage critical awareness of the potential entailments of narratives and compare them with those of alternative narratives. One alternative narrative to *JACK AND THE BEANSTALK* is found in the children's book *What Jill Did While Jack Climbed the Beanstalk* (NR5). In this narrative, Jack has a sister, who also received magic beans. Except in this version she planted them and reaped an enormous field of bean plants. The family had enough to eat and shared the food with their friends and neighbours. This overcomes the negative entailments of the traditional narrative by promoting enterprise which works for the good of the wider community rather than for individual financial gain. In terms of verticality, it celebrates staying close to the productive soil of the ground, and it promotes the horizontality of sharing. Rebecca Solnit's alternative telling of Cinderella, *Cinderella Liberator*, also ends with a similar message when the cruel sisters realise that:

- There is always enough for everyone, if you share it properly ... There is enough food, enough love, enough homes, enough time, enough crayons, enough people to be friends with each other. (NR6)

Entailments that promote sharing resonate with the ecosophy of this book since they can promote both wellbeing and staying with environment limits

through conserving resources. While retellings of dominant narratives do have important liberatory and ecological potential, Crowley and Pennington (2010) also describe how there are pitfalls of being overly prescriptive or reconfirming rather than truly subverting the original stereotypes. And, of course, whatever the new version of the story is, it will need to be as vivid, engaging and captivating as the original if it is to become popular and spread its alternative message.

Another possibility in the search for new narratives to live by is the use of traditional storytelling techniques to craft new narratives that are designed to speak to the ecological issues that the world is currently facing. An example is the *Knock at the Door* collection of short stories which contains dozens of ‘modern folk tales for troubling times’ (NR7). These narratives help the reader envisage the changes we need to make to move beyond ‘an economic system that drives inequality, crushes the spirit and corrodes our ecological life support’ (NR7:11). Philip Pullman, in the foreword to the series, writes:

Stories are one of the most ancient and most effective ways of making sense of the world ... The human imagination is profoundly important, and when it turns to exploring the problems we human beings find when we try to live a good life in a world we seem to be simultaneously destroying, there is nothing more valuable or worth encouraging.

One of these modern folk tales, *The Magician’s House* by Jan Dean, provides a useful demonstration of the powerful coming together of metaphor and narrative. In this tale, the main character, Genet, signs a contract with a magician to work for a year and a day lighting fires in his house in exchange for her heart’s desire. The house is small, and the work is easy. However, the house suddenly starts growing exponentially and Genet must work harder and harder to light the fires in all the new rooms that keep appearing. It grows so much that it starts to cover the Earth and the warmth from its fires melts the ancient ice at the poles. After her time is up, Genet tries to leave the house, with the last words of the tale being ‘But she could not. For now the house was all there was’ (NR7:17).

In this narrative, there is a clear sequence of logically connected events occurring over a year and a day; from the signing of the contract, to the house repeatedly doubling in size, to Genet trying to leave at the end with nowhere to go. The impact of the house in melting ice at the poles is one of the clues that the narrative is not just a tale about a magician’s house but a metaphor for the growth of industrial civilisation and its encroachment on the natural world. It illustrates exponential growth on a finite planet in a vivid way by simplifying complex processes occurring over long timescales into the structure of a simple sequence of easily imaginable events.

The metaphor of THE MAGICIAN’S HOUSE can be analysed in exactly the same way as a normal metaphor, except that instead of a source frame there

is a *source narrative* which structures the target domain of industrial growth. Within the metaphor, Genet maps onto exploited workers, the house maps onto industrial civilisation and the melting of the poles by the fires of the house maps onto anthropogenic climate change. The metaphor conveys an entailment that the exponential growth of industrial civilisation destroys life on the planet. Narrative and metaphor often work together in this way, and a ‘binocular’ focus on the intermingling of these two linguistic devices has been fruitfully explored in a series of works by Michael Hanne (Hanne 2011; Hanne and Kaal 2018).

Narrative structures are the bare bones of logically connected events occurring in a sequence, but it is narrative texts which flesh out the details and make them come alive. If narrative texts are vivid and powerful enough then listeners can feel that they are vicariously living out the events. Annette Simmons describes how ‘personal experience delivers deep understanding that allows true empathy’, with the example of putting an investor to work in a sweatshop in a developing country before asking him to insist on better working conditions for his suppliers. But where personal experience is unfeasible, narrative texts can provide the next best thing, to the extent that Simmons defines story as ‘a reimagined experience narrated with enough detail and feeling to cause your listeners’ imaginations to experience it as real’ (Simmons 2015, p. 22).

One power that narrative has is the ability to allow people to imagine the lived experience of not only other humans but also other species. As Herman describes:

Narrative can be viewed as a resource for modelling the richness and complexity of what it is like for nonhuman others, and hence as a means to underscore what is at stake in the trivialisation – or outright destruction – of their experiences.

(Herman 2012, p. 101)

Narratives can therefore be extremely effective in giving salience to elements of the natural world which are so often erased in contemporary discourse. The book *Being Salmon, Being Human* by Martin Lee Mueller provides an excellent example of giving salience to the lived experience of animals. The preface defines a clear goal: ‘We are in the midst of a systemic ecocide ... This is the time to abandon humanity-as-separation and to aid forth the emergence of entirely different stories to live by’ (Mueller 2017, p. xiii). Mueller contributes to the search for new stories to live by, firstly by critiquing industrial representations of salmon:

Biomass is how fish farms define what a salmon is. [Biomass] is a stand-in for a concrete equation: Living beings equal flesh; flesh equals mass; mass equals numbers; numbers equal economic performance.

(Mueller 2017, p. 33)

He then draws from indigenous folktales about salmon, such as the Native American tale *Salmon Boy*, in the search for narratives that can help us rethink our relationship with the natural world. *Salmon Boy* (NR8) is a mythical tale of a boy who breaks an agreement with the salmon, causes them harm, but is nonetheless rescued from drowning by the salmon and treated with kindness as an honoured guest in their underwater village. On return to his community, he calls on the villagers to treat the salmon with respect. Mueller says of the tale that it ‘opens the listener’s experience to being embedded within a living Earth teeming with agency’ (Mueller 2017, p. 186). He describes how the salmon in the tale assume the role of elders, helping the boy into his maturity by making him aware of the consequences of his actions on other beings. This, Mueller concludes, makes it inconceivable to think of salmon as ‘resources’ or ‘stock’. In general, the combination of temporal and logical connections in narratives, together with vivid imagery, offers great power to link ecological destructive behaviour with its negative impacts on the world, and in doing so convey entailments that promote pro-environmental behaviour.

In addition to drawing from indigenous tales, Mueller writes his own micronarratives to contribute to the shift towards new stories to live by. One of them, *Being Salmon*, traces the journey of a female salmon from her birth in a freshwater stream to her emergence into the ocean. The moment that she first encounters saltwater is captured vividly as follows:

- She pays attention to the others. Her eyes, her tongue, her lateral line, her muscled fin ... the confluence of her senses flowing back and forth between her nervous system, the others and the encompassing river ... Her shuddering muscles, her fins, her scales, the whizzing network of her nerves – her entire pulsating body was strangely on edge: salt! (NR9:133)

The writing pays close attention to both the mental and embodied experience of the salmon, helping the reader to empathise with the thoughts, feelings and bodily sensations of another being. There is the mental process of ‘attending to’, the lexical set of body parts, and, most effectively, the present continuous verbs *flowing (back and forth)*, *shuddering*, *whizzing*, and *pulsating* which vividly capture the rhythm of bodily life processes. The importance of this kind of writing in creating empathy beyond the human world is described well by Herman (2012, p. 100):

In stories figuring the moment-by-moment experiences of non-human animals, narrativity emerges from the attempt to imagine how a different kind of intelligent agent constitutes the world – and from using this imaginative engagement to prompt, in turn, a rethinking of the relationship between human and non-human experiences.

Oral storytelling is particularly powerful because the narrative texts it creates include not only words but intonation patterns, gestures and interactions with audience and place. As Nanson (2011, p. 146) describes:

In the storytelling moment a web of connections is woven between the storyteller and the audience, and among the audience and between them and the place where they are. If the place is outdoors then a connection is made with whatever aspects of nature are manifest there.

Although oral storytelling has been eclipsed by writing in industrial societies, there is a growing number of oral storytellers who are using their craft to challenge the dominant stories of industrial civilisation and promote more ecologically beneficial stories to live by (Gersie *et al.* 2014; Molthan-Hill *et al.* 2020). Nanson describes how these storytellers use oral tales to ‘bridge the ravine of modern society’s alienation from nature and to counterbalance the logic of economic self-interest with values rooted in ecology, community and compassion’ (Nanson forthcoming).

One of Nanson’s narratives is *The Passenger Pigeon*, an extinction tale that attempts to create empathy for its main character, which is an entire species. The tale begins as follows:

- The passenger pigeon was once the most abundant bird on earth. It’s possible that forty per cent of all the birds in North America were passenger pigeons. The early European settlers were amazed to see such enormous flocks, hundreds of kilometres long and containing literally thousands of millions of birds. (From the transcript provided in NR10:114)

The narrative continues by describing a series of events in which the birds were hunted and killed in an increasingly mechanised way. It finishes with:

- Until there was just one left. They called her Martha ... She died on 1 September 1914 at 1pm. With her death the passenger pigeon, which had once been the most abundant bird on earth, became extinct. Martha’s body was ... stuffed and put on display in a glass case. She remains in the collections of the Museum of National History to this day. (NR10:116)

The bare bones of the narrative structure consist of: (1) a temporal sequence of events from the arrival of the European settlers to the present day; (2) a numerical sequence that starts with vast numbers of birds and ends with none; and (3) a logical sequence of causality which explains why the numbers went down. The narrative text, however, goes beyond the bare bones to convey the events vividly in ways that evoke empathy for the birds and caution against repeating the ecological disasters of the past.

It can be hard to create vivid images of something as abstract as extinction, but Nanson draws on the testimony of the naturalist John J. Audubon who witnessed the flocks first-hand. The similes and sense images in sight, sound and smell in the following passage allow listeners to imaginatively witness the events as if they were there:

- He [Audubon] said the sky was literally full of birds and the noonday sun was darkened as if by an eclipse. Their droppings fell from the sky like snow and the noise of so many beating wings overwhelmed his senses ... The smell in there was incredible ... the sound as they landed in the trees was like thunder, their wooing calls were like the ringing of bells...

The narrative text represents the reduction in the numbers of birds through a lexical set of killing verbs: *killed*, *hunted*, *destroyed*, *slaughtered*, *obliterated*, *shot* and *shot down*, which all imply a deliberate action. It also includes a lexical set of technologies involved in the operation, including *guns*, *nets* and a *primitive kind of machine gun* as the direct implements; *the telegraph* as a way of coordinating the activity; and *railways* to bring the birds to market. These lexical sets, along with the word *mechanised*, trigger a technological frame and associate it with killing and extinction. In this way the narrative challenges the dominant story in industrial countries of technological progress as an unmitigated good. As Nanson puts it, ‘my presentation of the story, in both structure and delivery, implies a mourning of this creature’s loss and a challenge to the mode of development that necessitates such a loss’ (Nanson 2014, p. 144).

The aspect of the narrative text that is most likely to evoke empathy is how it ends: with a focus on the last passenger pigeon, Martha. She is individualised and given salience by her name, by the details of her life (where and when she was born and how long she lived) and by the unusual precision of the timing of her death – ‘1 September 1914 at 1pm’.

In addition to the words, the oral performance of this narrative text includes features of intonation, pauses, gestures, eye contact and interaction with the audience. Nanson describes how he pauses after the words ‘That was the last time anyone shot – or saw – a wild passenger pigeon’ to mark that point in history, and then pauses even more emphatically after ‘one by one the captive birds died’ (Nanson 2014, p. 146).

The power of extinction narratives such as this is that they can condense an abstract process that takes place over a long duration and make it vivid by allowing the listener to imaginatively experience concrete key events and feel empathy for an entire species. As Heise (2016, p. 5) points out, ‘biodiversity, endangered species, and extinction are primarily cultural issues, questions of what we value and what stories we tell’.

In conclusion, revealing the narratives that circulate within industrial societies and shape relationships between people and the natural world is one of the key tasks of ecolinguistics. Even more important is the search for

new narratives to live by, which could be newly written or could be drawn from the oral narratives of traditional and indigenous cultures around the world – cultures which have lived sustainably in place for hundreds or thousands of years. As Machiorlatti (2010, p. 62) describes, ‘many traditional oral narratives of indigenous people are a direct reflection of their worldview that all creation is interconnected, with vast cyclical fluctuations and expressions of life, relationship, transformation and renewal’. Once beneficial narratives have been found they can be promoted in themselves and woven into the discourses of education, politics, policy or campaigning to provide new stories to live by (Jones and McBeth 2010; Gersie *et al.* 2014; Molthan-Hill *et al.* 2020).

Ego, eco and origin narratives

In January 2020, an unusual article was published by *World Economic Forum* entitled ‘We must move from egocentric to ecocentric leadership to safeguard our planet’ (NR11). The narrative in this article starts with the trouble the planet faces. It then identifies the cause – deep-seated stories which see humans as ‘separate, dominant and superior to nature’, and nature as ‘a commodity to buy, sell, extract and exploit’. Finally, it identifies a solution for the future, where leaders adopt ‘an ecocentric mindset whereby we are grateful to and revere nature, rather than consider ourselves superior to it’. The narrative uses a problem/solution structure to link two classes of event, one taking place currently (egocentric leadership practices) and one in the future (ecocentric

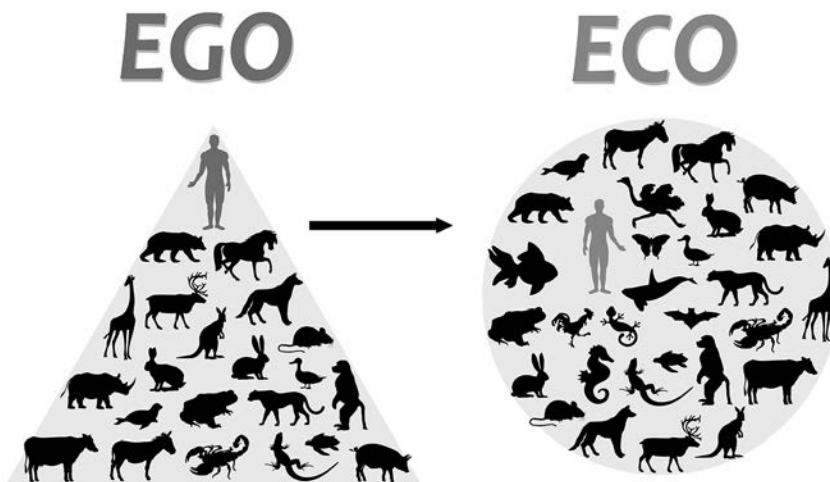


IMAGE 10.1 Ego and Eco meme. [desdemona72/Shutterstock.com](https://www.shutterstock.com/user/desdemona72)

practices). In doing so, it provides a rare voice within mainstream economics arguing for the intrinsic value of the natural world.

Alongside the text of this article there is a diagram which expresses the narrative in a visual form: on the left a pyramid with humans at the top and other animals below, and on the right a circle with humans amongst the other animals. In fact, this diagram is a common internet meme, appearing on many websites in slightly different forms, one of which is reproduced in Image 10.1.

The visual design of Image 10.1 is a classic given/new structure (Kress and van Leeuwen 2006, p. 180), where the *given* on the left is what the viewer is assumed to be familiar with, the already existing state of affairs. The *new*, on the right, is the ‘issue’, the ‘point’, a newly occurring or desired state of affairs. The *given* in this meme is the word EGO and the figure of the pyramid, representing the anthropocentric story of hierarchy which currently underpins industrial civilisation. The *new* is the word ECO and the circle, representing the desired ecological form of civilisation for the future. The position of the human on the top of the pyramid follows the verticality metaphor of UP IS

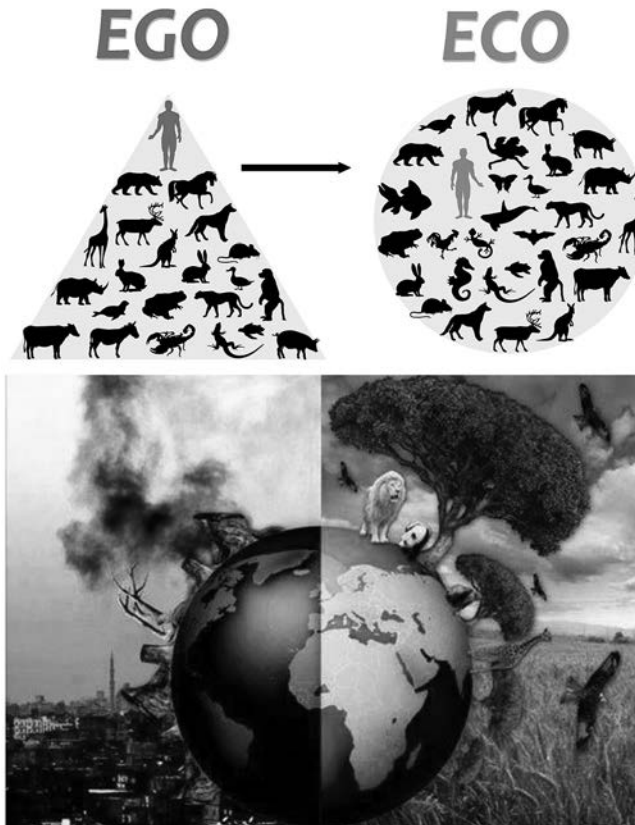


IMAGE 10.1a Ego and Eco meme variation 1

SUPERIOR, a logic which the circle on the right subverts by not having any animal fully above the others. The arrow between the two is, in Kress and van Leeuwen's (2006, p. 45) terms, a *vector*, and it instantiates a visual narrative by linking two events in a sequence. Even without the arrow, however, it is still a narrative representation because given/new structures provide both temporal and logical connections.

Different versions of the meme can be discovered by using the search term 'eco ego meme' in image search engines. Sometimes the meme appears with two further images below it which show a destroyed Earth with dry deserts on the left, and a green Earth with flourishing trees and animals on the right (Image 10.1a). This is visual narrative that gives a similar message to 'We must move from egocentric to ecocentric leadership to safeguard our planet'. In another version (Image 10.1b), the meme appears with a quote from Genesis 1:26 on the left below the pyramid that reads:

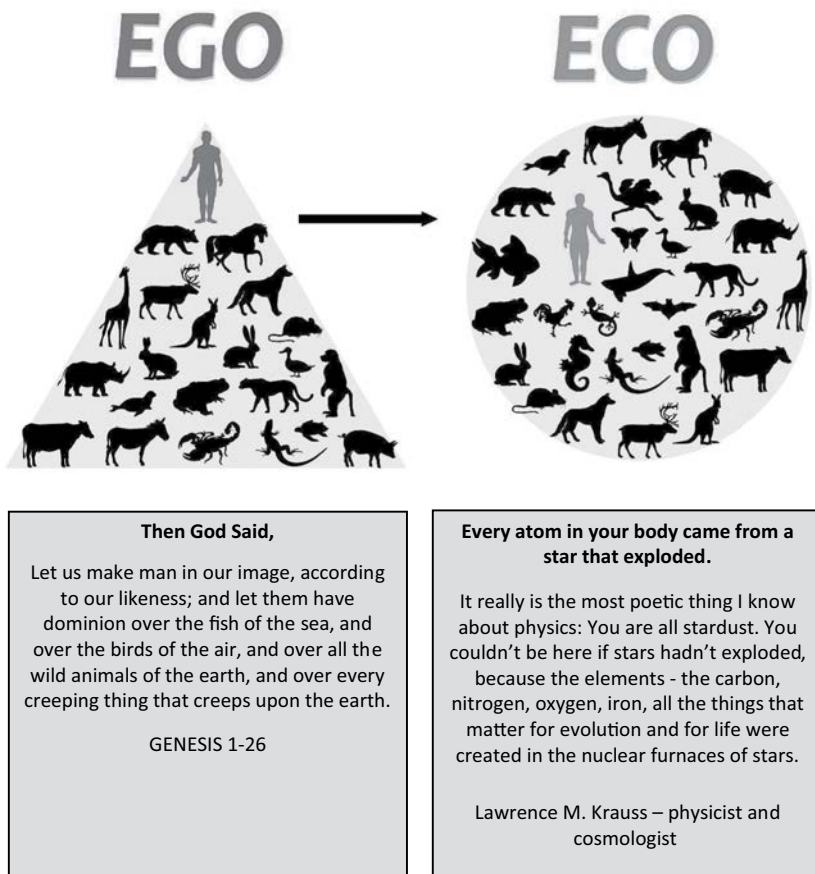


IMAGE 10.1b Ego and Eco meme variation 2

- [let humans] have dominion over the fish of the sea, and over the birds of the air, and over all the wild animals of the earth, and over every creeping thing...

The repeated word ‘over’ here performs the same verticality metaphor as the physical location of the human at the top of the pyramid. On the right-hand side, below the circle, is a quote from a physics professor, Lawrence Krauss:

- Every atom in your body came from a star that exploded ... all the things that matter for evolution and for life ... were created in the nuclear furnaces of stars...

The *theme* of this second quote, in Halliday’s (2013, p. 88) sense of ‘the point of departure’, is anthropocentric – the atoms of the reader’s body. However, the expression ‘for evolution and for life’ implicitly includes all forms of life equally, as all arise from stars. When the meme includes quotes from scriptures and scientists it is drawing from deep-seated narratives about the origin of life and the Universe that potentially play a powerful role in shaping how people relate to other species and the physical environment. These deeper narratives are worthy of further exploration.

In the narrative of the creation myth in Genesis 1, there is a clear series of events, which occur in temporal order, with an enumeration of days emphasising the temporality. To summarise briefly: the first event is God creating heaven and Earth; then light and the first night and day; then sky and waters on the second day; then land and sea, then grass, herbs and trees on the third day; then the Sun, Moon and stars on the fourth day; then ocean creatures and birds on the fifth day. On the sixth day, God creates land animals; then humans in his image; then God grants humans dominion over animals and the Earth. He then gives humans seed-bearing plants and fruit trees to provide food; and gives green plants to other creatures for food.

The narrative structure is fleshed out in different narrative texts in different ways, from the original Hebrew version and thousands of translations in hundreds of languages, to the same underlying structure appearing in plays, films or picture books. The following two versions of Genesis 1:28 are examples of this:

- New International version: ‘fill the Earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground.’
- King James version: ‘replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the Earth’.

These are describing the same narrative structure using different but synonymous lexemes (fill/replenish; rule/have dominion; birds/fowl; living creature/living thing; ground/Earth).

As with all narratives, there are a range of different narrative entailments that can be drawn out and emphasised. It would be possible to draw out an entailment of human exceptionalism from the temporal sequence where humans were created last (i.e., with narrative end-focus); the fact that they were the only beings created in the image of God; and were the only beings given dominion over the rest of creation. In a classic paper, Lynn White (1967) argued that ‘Christianity is the most anthropocentric religion the world has ever seen’ because ‘God planned all of this explicitly for man’s benefit and rule; no item in the physical creation had any purpose save to serve man’s purposes’ (p. 1205). White contrasts the creation narrative with earlier pagan narratives of nature spirits who must be considered and placated. He concludes ‘by destroying pagan animism, Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects’ (p. 1205).

Unsurprisingly, White’s strong views led to great amount of debate in the more than half a century since he expressed them (LeVasseur and Peterson 2017). Charles Camosy (2017) expresses a very different opinion:

Genesis 1 and 2 are among the best pro-animal texts we could ever imagine there being. Nonhuman animals and humans are created on the same day of creation. Both share the breath of life. God commands humans to eat plants ... It is true that in the biblical narrative God gives Noah and his descendants (limited) permission to eat meat, though this notably occurs after sin enters the order of creation.

The key entailments that Camosy implicitly draws out are: (a) that humans and animals are equal, since both share the breath of life and were created on the same day; and (b) that Christians should eat plant-based foods. In eco-linguistic terms, Camosy is describing Genesis as a *beneficial* narrative in the sense that it promotes plant-based lifestyles, while White is describing it as a *destructive* narrative that promotes human exceptionalism. Both, however, share the same aim of promoting ecological awareness.

On the other hand, Tony Abbott, former prime minister of Australia, used the creation narrative for a very different goal: climate change denial. In a speech to the *Global Warming Policy Foundation* in 2017, he reiterated his earlier assertion that the settled science of climate change was ‘absolute crap’. He described climate change as a new religion, ‘sacrificing our industries and our living standards to the climate gods’ because societies have ‘forgotten the scriptures about man created in the image and likeness of God and charged with subduing the earth and all its creatures’ (Abbott 2017). This is an illustration of how stories may exist deep in the background of cultures and be brought back to the surface in different ways to serve ecologically beneficial or destructive goals.

There are, of course, a vast number of creation myths from across the world to explore. Alida Gersie's book *Earthtales: Storytelling in Times of Change* (NR15) is a useful resource because it brings together stories and myths from indigenous and traditional communities that speak to ecological issues, and describes ways that the narratives can be used practically in education to open up new ways of thinking. The book begins with *How the Earth was Made*, a retelling of a Cheyenne creation myth. The myth bears some similarities to the Genesis creation story: there is a creator, the great spirit Maheo, who starts with nothing in darkness but then creates salty water, then fish, then birds that live on the water. However, it departs from Genesis because the birds are not just passively 'created' but play an activated role. They are Sayers of verbal processes, speaking with Maheo, asking for land to make a nest. They are then activated further by being agents of materials processes of 'flying', 'finding', 'diving', 'swimming' and bringing things back as they help Maheo create the land. Eventually they find mud, and the giant Grandmother turtle offers her back to place the mud on, and this became the land. After that, Maheo creates humans, and only after that the land animals. The giving of agency to the birds and turtle and placing the creation of humans in the middle, rather than the end of the sequence, gives humans a more humble place in nature than narratives where humans are created last or appear to be the pinnacle of evolution. As Gilderhus (1994) puts it, in the Genesis story 'God is separate and has no creative assistance from his creatures. God is sacred' whereas in the Cheyenne narrative 'all creatures share in the process of creation which makes all things sacred' (p. 70).

Scientific narratives of the origins of the Universe are just as open to critical analysis because the history of the Universe is vast, and they will necessarily select particular events to focus on. The 'big bang' is an obvious starting point, but from then the Universe expands in all directions for 14 billion years, so the narrative may narrow to a particular solar system, a particular planet, and the evolution of a sequence of increasingly complex lifeforms. Of particular interest is where the narrative stops. Does it close with the emergence of particular classes of animals, of modern human beings, or of human civilisation? Or does it close with the ecological destruction caused by humans and the hope of a more ecologically sensitive form of civilisation in the future?

One example narrative, *Big Bang to Civilization* (NR12), which appeared on the website *Live Science*, makes the start and end points very clear in its title. After the 'big bang' it describes the following events: the formation of the stars, the solar system, organic molecules, Eukaryotic life, a period when 'dinosaurs ruled the Earth', and then a meteor strike which destroyed them. Following this is the passage:

- But the small furry mammals that burrowed underground survived. They had been living in the shadows of the dinosaurs all along, but with the dinosaurs gone they could now thrive and grow in size. They became the new rulers of the Earth. Eventually the mammalian lineage evolved into

primates, then apes, then hominids, and finally the Homo lineage that produced human beings. (NR12)

The words ‘had been’, ‘now’, ‘became’, ‘new’, ‘eventually’, ‘then’ and ‘finally’ are all temporal markers, linking the events into a sequence. The expression ‘the mammalian lineage evolved into primates’ erases the many other classes of mammals aside from primates that evolved after the dinosaurs, and the sequence of events presents human beings as being the last species of all to evolve. In addition to this, the expression ‘rulers of the Earth’ sets up a natural hierarchy, which, by implication, has humans at the top by the end. The words ‘ruled’ and ‘rulers’ echo the wording of some versions of the Genesis story.

If an origin narrative stops with the evolution of modern humans then there is a danger of an entailment being drawn out that humans are the final species to evolve in a chain of increasingly sophisticated and ‘better’ organisms – indeed, the *Big Bang to Civilization* text states: ‘It seems that the humans living in East Africa who survived the Toba event were a new and *better* version of Homo sapiens’ (NR12, emphasis added). An educational project from the University of California (Berkeley 2020) specifically counters the drawing of entailments such as these by setting up the metaphor EVOLUTION IS A LADDER (another verticality metaphor), but then replacing it with the less hierarchical EVOLUTION IS A TREE:

It is tempting to see evolution as a grand progressive ladder with Homo sapiens emerging at the top. But evolution produces a tree, not a ladder – and we are just one of many twigs on the tree.

After the appearance of humans, *Big Bang to Civilization* describes the emergence of early and modern forms of civilisation. However, it tries to prevent readers from drawing out the entailment that modern civilisation is the crowning achievement of the universe by giving a selective list of characteristics that gives it an overall negative appraisal: ‘centralized government and power, military forces and warfare, institutionalised religion, patriarchy, monetary systems, poverty, large-scale agriculture, trade networks, and empire’ (NR12). It ends with ‘But is this model [civilisation] still serving us well, or is humanity ready for something new, the next Great Leap?’ This rhetorical question clearly implies that it is time to move from current industrial civilisation to something new, compensating for some of the hierarchical entailments of the narrative.

The Emmy award-winning documentary *Journey of the Universe* provides a different science-based narrative about the origins of the Universe. It ends with an extremely concise narrative that summarises the whole film:

- These deep discoveries of science are leading to a new story of the Universe. It’s a story that can be summarised in a single sentence. Over the course of 14 billion years hydrogen gas transformed itself into mountains,

butterflies, the music of Bach, and you and me, and these energies coursing through us may indeed renew the face of the Earth.

(NR13)

Although short, there is a lot to analyse in this text. Firstly, the facticity is raised by the first sentence which makes the story of the Universe appear to arise directly from the discoveries of science without an intermediate agent crafting it. Secondly, the activated characters are ‘hydrogen gas’ and ‘energies’, which locates the force of creation in the physics of the Universe rather than a deity. This force is described as being channelled *through* humans, which goes beyond ecological identity to what we could call a ‘universal identity’ or ‘cosmic identity’, where humans are an integral part of the Universe. The other characters in the narrative are passivated and presented in a clear order – firstly ‘mountains’, which can be seen a metonym standing for the physical environment; then ‘butterflies’ standing for ‘animals’; then the ‘music of Bach’ standing for cultural achievement; and, finally, ‘you and me’, standing for humans. The choice of a western composer, Bach, gives a Eurocentric aspect to the narrative, and the sequence ends with the human. However, the agency in the last sentence is not human agency but the agency of the physical Universe working through humans, and the end-focus is on ecological action that can preserve life on Earth. This potentially leads to entailments which encourage ecologically beneficial actions. The narrative in a sentence here is just a tiny part of the film which gives a much fuller narrative; and, as well as the film, there is a corresponding book, a website, a TED talk and an online course. In this way the narrative can be both complex and multimodal.

A similar project, the *Deep Time Walk*, provides yet another mode – a mobile phone app which takes the listener on a journey in a quite literal sense. This is how the app is described:

- Deep Time Walk is a 4.6 km walking audio history of the living Earth. This unfolding takes you from 4,600 million years ago to the present day, with each metre you walk representing 1 million years. [From the narration by] a Fool and a Scientist you learn how our planet evolved over this vast stretch of time.... (NR14)

In addition to the app, the Deep Time Walk project offers a field kit for people to lead their own walks, which provides a resource for the creation of their own local and culturally contextual narratives.

As the listener walks, the app measures the distance they have travelled and describes the corresponding events from the timeline of Earth’s history,

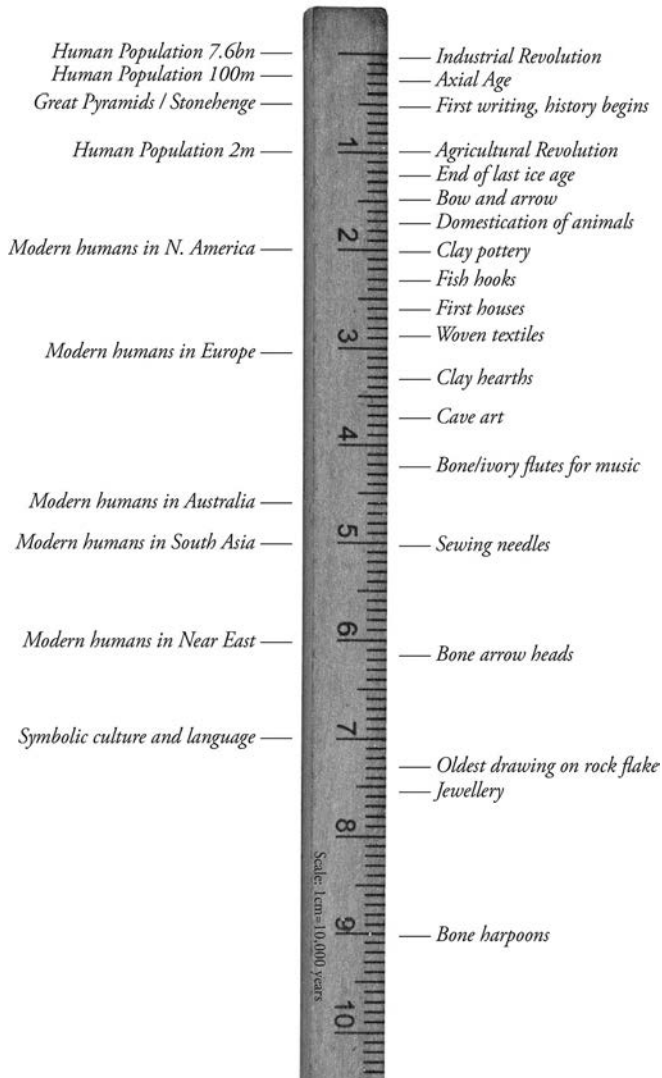


IMAGE 10.2 Time and distance. © The Deep Time Walk/www.deeptimewalk.org

using a commentary written by Stephan Harding and Peter Oswald (NR14). The commentary is structured as a conversation between two characters, the Scientist and the Fool. Just before embarking on the walk, the Fool explains:

- We'll walk four thousand six hundred metres,
Four thousand six hundred million years,
From the explosion from which the Earth came,

to the present moment.

We can take one other person with us,

That's you listener. Come with us. Walk with us. (NR14)

These words align the physical distance with the span of time and map both dimensions onto the start and end events of the narrative. The direct address and imperatives reach out to the listener and bring them into the narrative. One of the most powerful aspects of the experience is that 200 years of industrial civilisation normally seems like a long time but is only the final 0.2 mm of the 4.6 km walk. This helps bring salience to the fact that life, which took so long to develop, is being destroyed in just the briefest flash of geological time.

The final hundred thousand years is represented with a visual metaphor of a ruler published by the Deep Time Walk (reproduced as Image 10.2). The ruler is a reference to the original deep time walks led by Stephan Harding in person along the south Devon coast. Right at the end of the walk Harding places a yellow tape measure on the ground and then describes facts such as there being 12mm since the last ice age, 5 mm since Stonehenge was built, and only 0.2 mm since the industrial revolution.

The expressions 'living Earth' and 'our planet evolved' in the description of the Deep Time Walk frame the planet as an organism – a framing which occurs frequently during the narrative. At one particular point, 2.7 billion years ago (or 1.9 km of walking), a key event occurs which triggers the framing: 'the birth of Gaia'. From this point the commentary uses the expression 'lady Gaia' and the pronoun 'she' to personify the Earth. Much later in the narrative text, after the evolution of humans, the Scientist laments that human consciousness lacks 'Gaia's gift for favouring her own survival', lacks self-regulation, and is wrecking the Earth. Towards the end of the narrative the Scientist addresses Gaia directly with a second-person pronoun: 'If we wound you, it is us that dies ... there is no gap between us at all, we are the same thing!' The narrative therefore builds towards an entailment of a planetary ecological identity – that humans are not just a part of nature but part of a living planet that was born and evolved as an organism. And that we are in danger of destroying this organism and, in doing so, destroying ourselves.

A key question is whether there is any empirical evidence that alternative origin narratives, and the worldviews they correspond to, influence people's actions. A study by Taylor *et al.* (2019) conducted statistical analysis which compared 328 informants' religious beliefs (through the lens of theistic beliefs and views of evolution) and beliefs about the place of humans in the world (through the lens of humility) with their environmental behaviours (focusing on food, transport and energy use). The authors came to the following conclusion:

Those who hold anthropocentric and monotheistic religious views, and express low levels of environmental, religious, and cosmic humility, are less likely to engage in pro-environmental behaviours than those who maintain views ... that are ecocentric, Organicist/Gaian, pantheistic, animistic, and that in general reflect humility about the human place in the world.

Although the study had limitations and more research is required, it does at least suggest a correlation between views and behaviour – in other words, the stories in people’s minds influence not only how they think and talk but also act. And in this case, the more humble views of humans’ place in the Universe were correlated with positive treatment of the environment.

This section could only touch briefly on a few narratives – there is a vast amount of multimodal material to be explored, from creation stories of the major world religions, to the origin stories of science, of fiction and film, and to the myths of traditional and indigenous cultures across the world. Clearly, narratives about the origin of the Universe and life can influence how we think about our relationship with each other, other species and the physical environment and how we act, so they are of great importance for ecolinguistics.