

Essay: Assess Mary Midgley's claim that the "theory of evolution is not just an inert piece of theoretical science ... (but is)... also a powerful folk-tale about human origins"

Introduction

Folk-tales may seem at first glance to be rather far removed from the lofty scientific theories that underpin many of the predominant worldviews about evolution. The general insistence by mainstream scientists and other academic authorities on the need to adhere to rational, scientifically measured thinking and evidence as the basis for any serious consideration of the origins of life has left many people with the impression that only those who command the language and laws of science can have access to its tenets and theories - which do indeed often appear as inert and lifeless to many non-scientists.

The focus of this exploration of philosopher Mary Midgley's claim will be on why folk-tales, stories and myths are vital for humankind's apprehension of the theories of evolution. It will pay particular attention to the notion of the power of stories and worldviews to bring to life the concepts and theories of scientific and technical progress. And it will underscore the importance of maintaining an open, enquiring mind to ensure that the tales that persist continue to bring meaning to the unfolding drama of life.

The drama of life

We need stories to understand life: who we are as people, in a given place, at a given time, on this planet. If human beings are to grasp a sense of the origins of life, even from a Cartesian "I think therefore I am" perspective, the thinking person trying to comprehend the meaning of their existence will need to use a variety of cognitive and experiential means in order to "get the picture". Psychologist Carl G. Jung comments on the importance of this:

"Consciousness determines *Weltanschauung* (worldview of an individual or a group). All conscious awareness of motives and intentions is a *Weltanschauung* in the bud; every increase in experience and knowledge is a step in the development of a *Weltanschauung*. And with the picture that the thinking man fashions in the world he also changes himself....

it is not a matter of indifference what sort of *Weltanschauung* we possess, since not only do we create a picture of the world, but this picture retroactively changes us.” (Jung 1953, 5:696)

Hence the way(s) in which the theme of evolution may be described and presented can have a deep impact on how an individual or a group understands and acts in life. Midgley qualifies this process of acquiring - or fashioning - a picture, through what she calls a folk-tale, as “powerful”; and this perhaps is where the story really begins.

The craft of storytelling

Elsewhere in his work Jung proclaims: “A science can never be a *Weltanschauung* but merely the tool with which to make one”. (Jung, 5:731) And he goes on to suggest that depending upon an individual’s experience, education or life environment, they may either use this to consciously build or adjust a personal worldview, or simply adopt a new belief as a “dogma” – the latter being the more prevalent. And he concludes that this has led to the majority of people being “trained to develop one quality only; they become tools themselves.”

There are two aspects to this: the first echoes Mary Midgley’s position that, without the power of story to connect people to what are often inaccessible equations and incomprehensible hypothesis, couched in highly specific terminology, the theory of evolution remains “an inert piece of theoretical science”.

An example of this is the way in which public relations staff at the European Council for Nuclear Research (CERN) in Switzerland have used the image of strawberries instead of particles to explain to young (and older) visitors what may happen in the Large Hadron Collider (LHC) when they accelerate and collide protons or lead ions and observe the phenomenon of emergent properties: instead of getting a strawberry smoothie, they describe the discovery of other fruit such as bananas, or even perhaps hazelnuts. So science wrapped in story can become a delicious sandwich of learning!

Yet perhaps even more significantly, Jung’s statement also points to some of the risks of just accepting stories or worldviews without checking the facts or listening to alternative interpretations. The word “science” could quite well be replaced by “religion” – a theme which Mary Midgley also addresses with clarity and vigour in other works (however these are not the focus of this essay).

It is important to expand on the idea that increasingly in this post-modern era, stories that lead people to accept social, economic, technological, cultural or political – let alone religious or scientific – ideas, are dramatically powerful tools. And the so-called “spin-doctors” (spi-dors for short?) often weave such strong and complex webs of inventive tales that it is difficult to know how to separate facts from fiction in the midst of masses of opinions, and to find meaning in the midst of a great deal of hype.

A Spi-dor's web

Humans need to communicate a sense of the meaning of life to others and this is where the issue of power enters the story. The language and choice of metaphors and images to narrate messages are important. A skilled storyteller will draw people into the picture – just as a spider creates a web - with the purpose of capturing an audience – and if listeners are not equipped with qualities of discernment, they are likely to get caught up in the complex layers of conscious and unconscious processes that are part of the way humans develop their world views.

Again Jung throws in his grain of salt: “To have a *Weltanschauung* means to create a picture of the world and of oneself, to know what the world is and who I am. Taken literally, this would be too much... But, *cum grano salis*, it means the best possible knowledge – a knowledge that esteems wisdom and abhors unfounded assumptions, arbitrary assertions, and didactic opinions. Such knowledge seeks the well-founded hypothesis, without forgetting that all knowledge is limited and subject to error.” (Jung, 5:698 p. 278)

Bearing in mind the need for caution to counter efforts to draw everyone into one vision – whether of an all-powerful God figure or of a mechanical self-perpetuating scientific “truth” - Midgley also points to the importance of listening carefully to the different metaphorical descriptions used to communicate the sense of scientific theories about life. Writing about Mythology, Rhetoric and Religion in *Science and Poetry*, she points out that there is an inherent danger in simply accepting one kind of worldview with specific imagery, such as the Cartesian-inspired notion of a physical *corpus mundi* as a clock, or the individualistic, competitive sense of Richard Dawkins’ naming of the genetic motivation of most species as “selfish”.

She cautions that no single worldview should be “allowed to become an imaginative monoculture” – a dramatic story that may distract and influence people into false illusions or a hardened dogmatic position. The contemporary political dramas played out in the media in many Western societies are an illustration of this phenomenon and a reminder that information passed through social media platforms (such as Facebook or Twitter) can have a powerful impact on masses of people. While the ethics of academically recognized disciplines, including science, are regularly examined and debated, the application of ethical codes of conduct in communications appears to be ignored by many and manipulated by others.

Author John C. Greene writing on “The Religious Role of Metaphor in Evolutionary Biology” in his publication *Debating Darwin: Adventures of a Scholar* makes frequent reference to Mary Midgley’s thinking on the dangers of “the scientific mythology that has grown up around the theory of evolution”. In a summary of different phases of the story of evolution as he understands it, he traces and comments on a number of developments that shed light on some of the tensions between science and religion that have coloured evolving worldviews:

“More than three quarters of a century intervened between the publication of Darwin’s *Origin of Species* and the general acceptance by biologists of the concept of natural selection as the centerpiece of evolutionary theory. In the interim, evolutionary theorizing was dominated by non-selectionist theories of orthogenetic, neo-Lamarckian, or saltationist-mutationist character. With the revival in the 1930s and 1940s of the idea of natural selection in the so-called ‘modern synthesis’, however, there was an efflorescence of metaphorical language seeking to give value and meaning to evolutionary processes and to the science of evolutionary biology. Gone for the most part was the evolutionary deism that had sustained Darwin throughout much of his scientific career. Most of the champions of the modern synthesis were agnostics or atheists violently opposed to any suggestion of theism, vitalism, or teleology in nature or in natural science. For them, the meaning of evolution had to be found in the evolutionary process itself, but without imputing any aim or purpose to that process. Scientific explanations, they insisted, must be ‘mechanistic’.” (Greene, 1999)

Subsequent attempts, by proponents of the modern synthesis, such as biologist Sir Julian Huxley, paleontologist George Gaylord Simpson, biologist Ernst Mayr and geneticist Sir Ronald Fisher, to uphold a “scientistic mythology” around the theory of evolution are dismissed by Greene as intellectually dishonest. He despairs of such a worldview which, from his own perspective, “deifies sciences, denigrates philosophy and religion, and panders to Western culture’s penchant for regarding science and technology as the guarantors of indefinite progress toward some hazy but glorious future paradise on earth. Worse yet, it fosters dreams of genetic manipulation and control designed to reshape imperfect human nature according to some scientistic ideal.” (Greene, 1999)

An escalation of power

Mary Midgley uses the metaphor of an “irresistible escalator” to refer to this idea that humanity is firmly on a path of inexorable progress, and to expand her position that the story of evolution is such a powerful one, with far-reaching effects on life at large.

In fact, the notion of evolution as an escalator, moving ever higher towards a more sophisticated species, did not find its origin with Darwin who, as Midgley noted, “relied on no such paid-up cosmic insurance policy to bail out the human race.” (Midgley 2005, p.245) She points rather to a progressive inflation of egos amongst researchers and pioneers of successful new technical and scientific developments.

Thus the ladder or escalator image reflects a delusion – another kind of myth – to support some scientists’ vision of becoming a super-race: “Resounding discoveries have combined with a sense of a commanding position on the frontiers of the physical and biological sciences to generate among these scientists a euphoric sense of cognitive omnipotence, of possessing methods which have finally been tested as correct and will be universally applicable.” (Midgley, 2005 p.253)

In a sense, it sounds like the myth of mechanistic thinking has prevailed amongst the biochemists. So as Mary Midgley points out, down the years, while the role of a divine “designer” figured large in the story of life for religious believers, it was the theory of

natural selection that gave the scientists a storyline to explain the absence of an original creator.

Today, three scientific and technological developments in particular have risen to the top of the escalator: nuclear power, information technology (including artificial intelligence) and genetic engineering. Midgley comments on the powerful worldviews that have grown up around these developments: "World pictures like these are not primarily science... They are actually metaphysical sketches, ambitious maps of how all reality is supposed to work, guiding visions, symbols of direction for the rest of our ideas." (Midgley, 2005 p.287) The role of the storytellers then is vested with great responsibility as they transmit these tales to other folks...

Redrawing the map

Expanding on the statement that is the point of departure for this essay, at the start of her reflections on the notion of the irresistible escalator, Midgley observes: "Evolution, then, is the creation myth of our time. By telling us our origins it shapes our views of what we are. It influences not just our thought, but our feelings and actions too, in a way that goes far beyond its official function as a biological theory. To call it a myth does not of course mean that it is a false story. It means that it has great symbolic power, which is independent of its truth." (Midgley, 2005 p. 246)

A present-day storyteller, historian and author Yuval Noah Harari, writes in *Homo Deus: A Brief History of Tomorrow*, that the history of modernity is largely portrayed as "a struggle between science and religion." He posits that while religion is primarily concerned with order, science seeks power. "As individuals, scientists and priests may give immense importance to the truth, but as collective institutions, science and religion prefer order and power over truth. They therefore make good bedfellows. The uncompromising quest for truth is a spiritual journey, which can seldom remain within the confines of either religious or scientific establishments." (Harari, 2017 p.231).

So how might it be possible to reconcile the great gaps and accept the notion that the "truth" about life cannot be owned? And given the dangers of false facts, fictitious figures and "fake news", can a new story, or stories, be imagined that can still bring meaning to life as humanity steps on into the future? When and how should the map be redrawn?

Mary Midgley emphasizes that when a scientific viewpoint related to a particular set of people, in a given place and at a certain time in history changes (for example Darwin's *The Origin of Species* contradicted established religious thinking about the role of God as "The Creator"), over time the metaphorical description may need to be adjusted to changing environments and circumstances. This echoes mythologist Joseph Campbell's comments in one of his interviews with Bill Moyers: "... myths offer life models, But the models have to be appropriate to the time in which you are living, and our time has changed so fast that what was proper fifty years ago is not proper today." (Campbell, 1987)

In *What is Life?* scientist Lynn Margulis and co-author Dorian Sagan propose a possible bridge to understanding how all sides could perhaps map out new meaning in a much richer way:

“The facts of life, the stories of evolution, have the power to unite all peoples. By integrating the data of thousands of scientists, and by cultivating the doubt and skepticism that is the epitome of scientific enquiry, the cultural invention called science could provide a more compelling, if ever corrigible, description of the world than do parochial myths and divisive, faith-demanding religious traditions. This hardly means that scientists are always correct. Yet the most meaningful story of existence for future humanity is more likely to come from the evolutionary worldview of science than from Hinduism, Buddhism, Judeo-Christianity, or Islam. The dual understanding of scientific inquiry and creation myth could become a single view: a science tale rich both in verifiable fact and personal meaning.”
(Margulis and Sagan, 1995 p. 218)

Conclusion – the power of now

It seems clear for philosopher Midgley, psychologist Jung, scientist Margulis, and many other eminent thinkers across all academic disciplines that there is no such thing as “pure scientific truth”, but that myths are the way in which meaning can be brought to the story of life on this planet to date.

Myths that underpin worldviews are powerful, potentially life-changing processes for those who accept to be drawn into exploring them with open mind and heart. The trouble is, these are frequently constructed from human tales whose original intention may be misunderstood or even hijacked for purposes of control, power or both.

Consequently, it behoves the student of this topic to remain alert, skeptical, discriminating and discerning as to the extent of their integrity and continuing relevance, and ready to pose new questions to ensure that meaningful myths and tales support new discoveries of emergent life stories.

Reading list

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