

Chapter 5: Worldviews

A worldview embodies a specific understanding of reality, based on presuppositions that are regarded by its exponents as, at least, reasonable, and, more boldly, as firmly established or even indubitable. From these presuppositions a synoptic account is developed of the basic features of reality, encompassing the human and non-human realms, and of how they relate to each other: which are fundamental, which derivative; which are fugitive, which permanent; which have value, which do not. There are various forms of worldview, such as religions and ideologies. But not all worldviews are religious, even though they do all embody metaphysical positions, nor are they all ideologies, at least if we take the latter to involve an orientation of practical action in pursuit of socio-political purposes (Baxter, 2007).

A worldview reflects what generations of people have experienced, prior to any conceptual notions. These pre-conscious “experiences” have been and continue to be translated into comprehensible orderings which subconsciously explain how the world ontologically is, becomes, or is experienced. An example of these core beliefs in Western culture is the idea of the substantiality of each being. From these core beliefs, interpretations are deduced on a semi-conscious level, such as the autonomy of people. Both the notion of substantiality and autonomy manifest themselves culturally in language, in institutional structures, in daily habits and cultural traditions, in rules and norms. Once a person is embedded in these basic assumptions, it will be difficult to “believe” other orderings. Yet, in spite of deeply branched articulations and their long-lasting nature, beliefs may change over long periods of time. This is because the ongoing interaction with other cultures and experiences within one’s own culture,

and personal lives, constantly reshape worldviews in an uncontrollable way (Note, Fornet-Betancourt, Estermann & Aerts, 2009, p.1).

A Worldview is a consistent constellation of concepts, especially metaphorical concepts, over one or more conceptual domain. Thus, one can have, for example, philosophical, moral, and political Worldviews. Worldviews govern how one understands the world and therefore deeply influenced how one acts. Multiple Worldviews are common place, and people commonly shift back and forth between them. Cultures differ considerably in Worldview within cognitive linguistics. The study of world view is an enterprise of considerable importance (Lakoff & Johnson, 1999, p.446).

American Association for the Advancement of Science(AAAS) and the US National Research Council define characteristic of science and the relation between Worldviews and science.

AAAS and the NRC endorse seven pillars of the scientific enterprise (Mathews, 2009, p.16).

These are:

Pillar P1: *Realism*. The physical world, which science seeks to understand is real.

Pillar P2: *Presuppositions*. Science presupposes that the world is orderly and comprehensible.

Pillar P3: *Evidence*. Science demands evidence for its conclusions.

Pillar P4: *Logic*. Scientific thinking usages standard and settled logic.

Pillar P5: *Limits*. Science has limits in its understanding of the world.

Pillar P6: *Universality*. Science is public, welcoming persons from our cultures.

Pillar P7: *Worldview*. Science hopefully contributes to a meaningful Worldview.

One can hardly ignore the increasing worldwide cross-fertilisation and interpenetration of different cultures, which is mostly referred to by using the umbrella term of ‘diaspora and art’.

The traditional leitmotiv of cultures that are profoundly embedded in nationalism is increasingly being challenged by new modes of post-national or even cosmopolitan citizenship. This globalising tendency towards differentiation and heterogeneity seems to be driven by new notions, experiences and expressions of cultural identity.

In this sense, contemporary art could be considered worldwide as a laboratory for building and exploring new *hybrid worldviews*. (Van den Braembussche, Kimmerle & Note, 2009, pp.1-2).

The question is whether a man can have more than one Worldviews simultaneously. Here is an example. Ramanujan (1989) described about his father. His father was a mathematician, and astronomer. But he was also a Sanskrit scholar, and expert astrologer. He had to kinds of exotic visitors: American and English mathematicians who called on him when they were on a visit to India, and local astrologer, orthodox pundits. Ramanujan was astonished that his father was holding together both astronomy and astrology in one brain. He read The Gita religiously having bathed and painted on his forehead the red and white feet of Visnu, a lateral talk appreciatively about Bertrand Russell.

5.1 Western Worldview:

Mainstream Western philosophy has some presuppositions. These are:

1. Reality comes divided up into categories that exist independent of the specific properties of human minds, brains, or bodies.
2. The world has a rational structure: the relationships among categories in the world are characterized by a transcendent or universal reason, which is independent of any peculiarities of human minds, brains, and bodies.
3. The concepts used by mind-, brain-, and body-free reason correctly characterize the mind-, brain-, and body-free categories of reality.
4. Human reason is the capacity of the human mind to use transcendent reason, or at least a portion of it. Human reason may be performed by the human brain, but the structure of human reason is defined by transcendent reason, independent of human bodies or brains. Thus, the structure of human reason is disembodied.
5. Human concepts are the concepts of transcendent reason. They are therefore defined independent of human brains or bodies, and so they too are disembodied.
6. Human concepts therefore characterize the objective categories of mind-, brain-, and body-free reality. That is, the world has a unique, fixed category structure.

7. What makes essentially human is the capacity for disembodied reason.
8. Since transcendent reason is culture-free, what makes essentially human is not capacity for culture or for interpersonal relations.
9. Since reason is disembodied, what makes essentially human is not relation to the material world. Essential humanness has nothing to do with connection to nature or to art or to music or to anything of the senses (Lakoff & Johnson, 1999, p.30)

The dominant view throughout the history of Western philosophy is that there is an essence that makes human beings is rationality. Reason has traditionally been defined as human capacity to think logically, to set ends for men, and to deliberate about the best means for achieving those ends. Reason is understood throughout the tradition as a conscious process that operates by universal principles.

More specifically, the classic view of rationality is defined by the following assumptions:

1. Rational thought is literal.
2. Rational thought is logical (in the technical sense defined by formal logic).
3. Rational thought is conscious.
4. Rational thought is transcendent, that is, disembodied.
5. Rational thought is dispassionate.

Lakoff & Johnson (1999) argues that everyday human reason does not fit this classical view of rationality at all. It uses not only metaphor but also framing, metonymy, and prototype-based inferences. Hence it is not "logical" in the technical sense defined by the field of formal logic. It is largely unconscious. It is not transcendent, but fundamentally embodied. Basic inference forms arise partly from the spatial logic characterized by image schemas, which in turn are characterized in terms of the peculiarities of the structures of human brains and bodies. The same is true of aspectual reasoning—reasoning about the way people structure events, which appears to arise out of the systems of motor control. Metaphorical thought, which constitutes an overwhelming proportion of abstract reasoning, is shaped by the bodily interactions in the world.

It is surprising to discover, on the basis of empirical research, that human rationality is not at all what the Western philosophical tradition has held it to be.

5.2 Aristotelian Worldview:

In the western world, the Aristotelian worldview was the dominant system of beliefs from about 300 BC to about AD 1600. This worldview was based on a set of beliefs articulated most clearly and thoroughly by Aristotle (384 – 322 BC). It is worth noting that the term “ Aristotelian worldview ” refers not so much to the collection of beliefs held specifically by Aristotle himself, but rather to a set of beliefs shared by a large segment of western culture after his death and that were, as noted, largely based on his beliefs.

Aristotle’s beliefs:

Aristotle held a large number of beliefs that are radically different from the beliefs of today . Here are a few examples:

- (a) The Earth is located at the center of the universe.
- (b) The Earth is stationary, that is, it neither orbits any other body such as the sun, nor spins on its axis.
- (c) The moon, the planets, and the sun revolve around the Earth, completing a revolution about every 24 hours.
- (d) In the sublunar region, that is, the region between the Earth and the moon (including the Earth itself) there are four basic elements, these being earth, water, air, and fire.
- (e) Objects in the superlunar region, that is, the region beyond the moon including the moon, sun, planets, and stars, are composed of a fifth basic element, ether.
- (f) Each of the basic elements has an essential nature, and this essential nature is the reason why the element behaves as it does.
- (g) The essential nature of each of the basic elements is reflected in the way that element tends to move.
- (h) The element earth has a natural tendency to move toward the center of the universe. (That's why rocks fall straight down, since the center of the Earth is the center of the universe.)
- (i) The element water also has a natural tendency to move toward the center of the universe, but its tendency is not as strong as that of the earth element. (That's why, when dirt and water are mixed, both tend to move downward, but the water will eventually end up above the dirt.)
- (j) The element air naturally moves toward a region that is above earth and

water, but below fire. (That's why air, when blown into water, bubbles up through the water.)

(k) The element fire has a natural tendency to move away from the center of the universe. (That's why fire burns upward, through air.)

(l) The element ether, which composes objects such as the planets and stars, has a natural tendency toward perfectly circular movement. (That's why the planets and stars continuously move in circles about the Earth, that is, about the center of the universe.)

(m) In the sublunar region, an object in motion will naturally tend to come to a halt, either because the elements composing it have reached their natural place in the universe, or far more often because something (for example, the surface of the Earth) prevents them from continuing toward their natural place.

(n) An object that is stationary will remain stationary, unless there is some source of motion.

This is a small list of Aristotle's beliefs. He had also extensive views on ethics, politics, biology, psychology, the proper method for conducting scientific investigations, and so on (DeWitt , 2010, p.8-9).

Much of the western world shared a more or less Aristotelian way of looking at the world upto 1600. This certainly does not mean that everyone believed exactly what Aristotle did, or that the system of beliefs was not added to or modified during this period. For example, at various times during this period, Judaic, Christian, and Islamic philosopher - theologians mixed Aristotelian beliefs with religious beliefs, and these sorts of mixtures illustrate some of the ways in which Aristotelian beliefs were modified in the centuries after his death.

5.3 Newtonian Worldview

Aristotelian worldview was replaced by the *Newtonian worldview*. This worldview has as its foundation the work of Isaac Newton (1642 – 1727) and his contemporaries, but it has been added to considerably over the years. As with the Aristotelian view, the Newtonian worldview has associated with it a large number of beliefs. Here are some examples:

1 The Earth revolves on its axis, completing a revolution approximately every 24 hours.

2 The Earth and planets move in elliptical orbits around the sun.

3 There are slightly more than 100 basic elements in the universe.

4 Objects behave as they do largely because of the influence of external forces. (For example, gravity, which is why rocks fall.)

5 Objects such as planets and stars are composed of the same basic elements as objects on Earth.

6 The same laws that describe the behavior of objects on Earth (for example, an object in motion tends to remain in motion) also apply to objects such as planets and stars. And so on for the other thousands of beliefs that compose the Newtonian

Worldview (DeWitt, 2010, p.12).

This is the worldview that most of the western world have been raised on. And the same story applies to the beliefs that compose the Newtonian worldview as applies to the Aristotelian worldview. In particular, the Newtonian worldview

comprises a system of beliefs that tie together as the pieces of a jigsaw puzzle tie together, forming a coherent, consistent, interlocking system of beliefs. While both the Aristotelian and Newtonian systems of beliefs are coherent and consistent, they are very different jigsaw puzzles, with quite different core beliefs.

Dewitt (2010) also thinks that “ most of us were raised with the Newtonian worldview, and since these beliefs were taught to us from an early age, they now look to us to be the obviously correct beliefs. But think about it: if we had been raised with the Aristotelian worldview, then the Aristotelian beliefs would have seemed equally like common sense. ...The universe, we now think, is not anything like the way it was conceptualized from within the Aristotelian worldview. Nonetheless, although wrong, those beliefs formed a consistent system of beliefs, and a system whose beliefs seemed, for almost 2,000 years, to be obviously right and commonsensical”(p.16).

5.4 Darwinian Worldview:

Charles Darwin did not intend to produce a worldview when he wrote *Origin of the Species*, aiming solely to tackle the specific intellectual problem referred to in the title of his book. Since he published that work in 1859 his scientific ideas have moved from the realm of the speculative to become received, in their twentieth-century neo-Darwinian form, as part of scientific orthodoxy. However, many thinkers have developed from his account of the origin of species, especially as applied to human being, a distinctive perspective on the universe that merits the label ‘worldview’.

The Darwinian worldview embodies, of course, the two key ideas of Darwin’s theory as applied to human beings. Firstly, it takes as axiomatic the claim that ‘*Homo sapiens* is an animal species’. Secondly, it accepts the Darwinian claim that this species, like all others on the planet, has arisen by a process of evolution by natural selection from an ancestor common to them all (Baxter, 2007).

5.5 Creationism:

This is the central weakness of the anti-Darwinian position known as ‘creationism’, which seeks to claim that the account of evolution by natural selection is false, not primarily because of its inherent intellectual failings (though creationists have sought to show that it is not adequate to the facts) but because a revealed text, the Book of Genesis, says the origins of species, and of life, are to be accounted for in some completely different way.

This way involves divine creation, of course, but that is really only a detail. The important point is that creationism counters a scientific account with one based on revelation. Once this is allowed, then of course science as a whole becomes problematic, for the whole of modern scientific cosmology contains an account (Baxter 2007).

5.6 Worldview of Science:

As a culture, science looks at the world through a particular view point. Suppose a painter and a meteorologist might examine the sky. Even though both could be looking at the same clouds, the ways they think about what they are seeing would be different. The artist might look at the sky and consider how it could be represented using paint: the shades of white, the edges of the clouds, and the gradation of color from straight over head down to the horizon. In contrast, the scientist looking at the same scene would make sense of the sky in a different way: the shape of the clouds suggests the temperature of the air, the direction of their movements indicates where the low and high pressures are, and the changing color the clouds given an idea about the approach of a cloud or warm front. Neither way of looking at the sky is superior. The tradition of artist and the tradition of the scientist serve different purposes recognizing that artist and scientist have different Worldviews. A distinguishing feature of the scientific Worldview is the principle that there are patterns in the world that scientists can understand. Through careful examination,

scientists feel they are able to identify the patterns, and they can use this knowledge to make accurate predictions (Settlage & Southerland, 2007, p. 2).

5.7 Future worldviews:

worldviews have tended to be accompanied by a prevailing metaphor or analogy. Again, within the Aristotelian worldview, the universe was viewed as like an organism, with parts functioning together to achieve natural goals and purposes. Within the Newtonian worldview, the universe was viewed as like a machine, with parts pushing and pulling and interacting with other parts, much like the way the parts of a machine interact (DeWitt, 2010, p.347).

DeWitt (2010) also thinks

“because of this, the universe suggested by recent developments may be a universe that does not lend itself to being summarized by any convenient metaphor. We may live in a universe that is like – well, that is not like anything with which we are familiar. For the first time in (at least recorded) history, we may be metaphorless. And we may have reached the point where we will never again be able to summarize the world we inhabit by appealing to a convenient metaphor. Nonetheless, even though the emerging view may not lend itself to being summarized by a convenient metaphor, some general view of the universe will probably emerge. And although it is difficult to predict what this view will be exactly, it seems likely that our children and grandchildren will develop a view of the universe that is substantially different from our own. This view will likely be shaped not only by the discoveries we discussed in the final part of this book, but also by developments occurring now and in the near future. Again, we live in interesting times” (p.348).

