

Kepler's Dream

Sky Lab – Kepler's Dream draws together nine artists who reveal their diverse responses to a complex physical universe through the medium of Johannes Kepler, the 17th century German mathematician and astronomer. Kepler wrote a number of scholarly texts about astronomy and optics, the contents of which are still recognized as prescient today. One of these texts was a fictional narrative he titled *Somnium, (The Dream)* written as he says, 'to work out through the example of the moon, an argument for the motion of the earth.'¹ Kepler was familiar with Galileo's telescopic observations and, coincidentally, there was a burgeoning interest in optics, instruments for seeing, mapping and the panoptic view seen particularly in Dutch 17th century art. These ideas were expanding the horizons of art, science and the known world.

However religious dogma at the time determined that scientific knowledge was deeply suspect. This induced Kepler to write his narrative in 1608 as an allegory. It was in fact also a 'science fiction', a guide for an adventurous lunar expedition, dreaming a possible future by imagining from his observations and his calculations, a way in which humans might travel to the moon. The subtext of his lunar expedition was the promotion of the Copernican view. This view deposed planet Earth's centrality in the known universe and proposed instead a heliocentric universe in which Kepler realized that planets journey around the sun not in circles but in elliptical paths. He reasoned that by taking people to the moon vicariously, and having them stand stationary there, he could show them the Earth in motion and demonstrate the theory.

But above all Kepler wished to communicate to his fellow man that the human animal was not the central figure in the cosmos, observing that 'the heavens did not wait upon his home planet, earth.'² He was living through tumultuous times of which we see resonances in our own contemporary world. It was Kepler's overriding desire that through an awareness of the physical world, and by observing the movements of the cosmos about them, (which he imagined as

¹ *Kepler's Dream* by John Lear with full text and notes of *Somnium, Sive Astronomia Lunaris - Joannis Kepleri*. Translated by Patricia Frueh Kirkwood - University of California Press Berkley and Los Angeles 1965

² *Ibid.*

God's glorious creation), humans would come to realize the odds against them in the grip of the vast forces shaping their environment. In contemporary terms we might see this creation, this physical world, more in terms of a reality that cannot be grasped completely. A reality which also poses questions about the ambiguities embedded in notions of good and evil. Nature holds us in both awe and fear as we gain knowledge of it, impose our human thoughts and expectations upon it and experience it in its many manifestations, not least of which is described by the poet A.L. Tennyson in his 1850 poem '*In Memoriam*' as '...Nature, red in tooth and claw...'

Kepler's *Somnium*, in a contemporary sense, is a timely reminder that for all our human ingenuity and hubris, manipulating and modifying nature for our own ends, we are only a small part of something very much larger than ourselves. We are, arguably, the 'caretakers' of a vulnerable space capsule we call Earth, described as our *Goldilocks* planet because our position and movement in space makes it not too hot, and not too cold. We've got liquid water and a decent atmosphere in which to survive. We're part of a greater ecosystem of living and non-living things. But there are no guarantees that our *Goldilocks* planet will be suitable for us forever.

Connected to the universe through the medium of light we keep searching and extending our vision through increasingly complex technologies, instruments, machines and data. We look for faint whispers from beyond, and speculate about what's out there, how it works, whether we are alone and the possibilities of escaping to another planet:

' (but) ...even if we found a faraway planet that's perfectly positioned in space for us: one that's not too close or too far from the sun; one without an extreme tilt or orbit or wobble; one with liquid water; one with a bearable atmosphere; and one that meets all the other requirements we haven't even touched on (bearable gravity, lack of collisions, composition of the atmosphere, availability of chemicals) ... we'd still need to pack our bags with plenty of plants, animals and microbes, and introduce them in such a way that would result in a stable ecosystem over long timescales. It's a big

ask. Perhaps living on another planet is possible, perhaps it's science fiction.³

Artists who are inspired by scientific interpretations of nature are inevitably confronted with ecological concerns. What, today, do we make of the world known by the scientist and the world of the artist? How does the artist translate human sensory experience into a world observed with instruments? As artists we respond to these observations with different insights. We are not inclined to be constrained by the evidence as would scientists, but like them we speculate about the possibilities for other dimensions of reality which might reveal insights about ourselves and the environment which we inhabit. In attempting to respond to the physical universe the artist is at liberty to reveal the idiosyncratic nature of human thought in poetic, political, playful or contemplative ways. Thus, the exploration of *Kepler's Dream* reminds us of the way in which the imagining of things draws us into different ways of seeing and responding to our universe in a world full of uncertainties and contradictions.

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³ (<http://www.nova.org.au/space-time/goldilocks-planet>)

