

*Measuring the Heavens*, Kate Bernstein's artist's book tribute to astronomers, libraries and printers

I met with Kate Bernstein just as she completed this new work in her studio in Bath. In 2018 Bernstein was invited to join Creativity & Curiosity artists on a visit to the library of the Royal Astronomical Society (RAS) in London. Little did she realise that this would lead to a major, Arts Council funded project culminating in 2020 with an exhibition of artists' books inspired by astronomical publications and the library itself.

On her first visit, archivist / librarian Dr Sian Prosser showed examples of early printed works to the group. Bernstein was enchanted with these publications and determined to visit again for further research. This led to a meaningful exchange of ideas between Bernstein and Prosser as repeat visits unfolded further inspirations. These conversations explored not only the history of how astronomical theories were posited and disseminated but also the function and purpose of the library itself. As their talks evolved, Bernstein found herself beginning to think differently about the way in which she would make her artist's book *Measuring the Heavens*.

Inspiration initially came through beautifully printed publications from the 1500 and 1600s that Prosser pulled from the library's collection. As Bernstein explains, "these incredible books took many years to produce, with single pages taking a month to print from copper plates or woodblocks and then hand colour. Peter Apian's *Astronomicum Caesareum* (1540) includes additions such as volvelles, movable measuring devices, threads and seed pearls to convey configurations and movements within the solar system. These are not illustrations but intricately accurate diagrams portraying scientific ideas."

Movement within and of the library itself also emerged in conversations that informed the production of *Measuring the Heavens*. Prosser was adamant that the library not be a static collection, that it should be mobile and outward looking. This formed a catalyst from which Bernstein and Prosser continued their conversations. Bernstein began making a series of three small books over 2019 in response to publications Prosser selected to show her: *Printer of Stars*; *The Infinite M*, and *The Typographical Planet*. The idea of movement within the library also impacted upon Bernstein's understanding of astronomy. As she began to realise "it's not about our romantic ideals of stargazing but a means of creating structure, placing the earth within in a universal system, one which moves in relation to its surroundings." Within the RAS library, as in a constellation, movement is created by the placing of books and the discourses that take place between them. Theories posited in one could take 100 years to disprove by another, hand annotations connected ideas, thoughts, and books to each other and to a wider public dialogue. Bernstein was also struck by the dedication of printers who spent years producing these publications so exquisitely and precisely according to the astronomer's wishes.

The making of her book *Measuring the Heavens*, became a responsive, organic process. Bernstein thought about the ways in which books can open in so many directions, through hinging and joining, overlays and threads. The metaphorical threads of subject matter also join the books together within the library. "The title is a direct translation of Johann Bayer's *Uranometria*, (1603) printed by Christopher Mangus with engravings by Alexander Mair; the first star atlas to be based upon scientific observations."

The boxed folio opens to reveal a gold embellished book cover with a telescope lens shaped hole through which we can peep at a detail of Bayer's *Serpens*. Leather onlay rounds play homage to the lens and the library's collection of 19<sup>th</sup> Century lunar photographs by Warren de La Rue. Inside we follow the serpent, weaving through pages printed front and back, and on their seams, in red and black and silver. The serpent moves through these pages, visible, then invisible, forming its own constellation of connections throughout. The numbers allude to the layers of information and ideas within the original publications in tribute to the astronomers and the dedicated printers who strove to disseminate their ideas.

Produced in an edition of 2, the process of responding over a period of time has been pivotal for Bernstein who is more used to a fixed idea to work towards. As she says "it has been a genuine exchange of ideas, and a joyful unfolding of the book's production through an ongoing collaboration. This experience has left me much more open to and excited about future collaborations rather than working solo in the studio."

*Measuring the Heavens* is touring libraries around the UK over 2020. For dates, visit the artist's website. <http://www.katebernsteinbookartist.co.uk>  
Creativity & Curiosity - a collaboration between artists and astronomers:  
<http://creativityandcuriosity.com/>