Introduction

DONALD M. FERENCZ

That the life of an eccentric sixteenth-century Danish astronomer should be prominently featured among the sources of inspiration for a modern-day treatise on international law may be surprising to some, but will perhaps seem less so to those familiar with his story.

Tycho Brahe was born in 1546 in Denmark, to a well-connected family of noble lineage. It may fairly be said that he was a man possessed. While at university in Rostock, Germany, he survived a duel with a fellow student in which the greater part of his nose was cut clean off. He wore a prosthetic replacement made of an amalgam of metals for the rest of his life – but it had little to do with his later claims to fame.

Although Tycho lived and died prior to the invention of the telescope, by the date of his untimely death in 1601 he had meticulously charted the position of more than a thousand stars, using only the naked eye and instruments that were built to his own specifications. The English author Alfred Noyes (perhaps best known for his poem "The Highwayman") celebrated the astronomer's life of dogged determination in a poetic volume entitled *The Torch-Bearers: Watchers of the Sky*, published in 1922. I first heard of it as a young man from my father, who had read portions of it that had been poignantly quoted in the eloquent writings of the distinguished twentieth-century jurist Justice Benjamin Cardozo. Like Cardozo, he was inspired by Brahe's story, and felt it well worth sharing.

To say that Tycho's career began, quite literally, with a bang is no exaggeration. On the night of November 11, 1572, in the skies over the Herrevad Abbey in northern Denmark, the then-twenty-five-year-old observed something quite unexpected. A light that had never been seen before was shining brightly within the constellation Cassiopeia. According to present-day reporting by the National Aeronautics and Space Administration, what Tycho saw that night was the after-effect of "a thermonuclear explosion as bright as a billion stars."

Fortunately for Tycho – as well as for the rest of planet Earth – the blast had occurred over 6,500 light years away (a single light year being equal to 6 trillion miles). Though others had also seen it, its sighting is most notably associated with Brahe due to the publication in 1573 of his *De Nova et Nullius Aevi Memoria Prius Visa Stella* ("On the New and Never Previously Seen Star"). Never mind that it wasn't a new star at all, but rather the explosive burst of a supernova emanating from the death throes of an extinguished sun; its sighting was a game-changer. Since the time of Aristotle, classical Western thought had held that the heavens were immutable and unchanging. The appearance of Tycho's supernova dispelled such assumptions and flung open the doors to new ways of thinking about the ordering of the cosmos.

With his credentials already well established, Tycho managed to have most of his future star-charting efforts underwritten with royal patronage from Frederick II, King of Denmark and Norway. An elaborate research complex and observatory was built for him on the Island of Hven (now part of Sweden). He named it Uraniborg in tribute to Urania, the ancient Greek muse of the heavens. It was there that for most of the next twenty years he searched the skies by night and conducted experiments in alchemy by day. With the passage of time, however, there arose a new king whose ministers had little interest in projects with such ill-defined utility. As Noyes tells the story, when the new king's emissaries challenged Tycho as to the practical value of his work, he offered nothing more than the firm belief that his accurate recording of the positions of the stars would help bring future generations that much closer to a truer understanding of the nature of the universe:

> "We are sent," they said, "to see and to report
> What use you make of these estates of yours.
> Your alchemy has turned more gold to lead
> Than Denmark can approve. The uses now!
> Show us the uses of this work of yours."
> Then Tycho showed his tables of the stars,
> Seven hundred stars, each noted in its place
> With exquisite precision, the result
> Of watching heaven for five-and-twenty years.
> "And is this all?" they said . . .
> "Not all, I hope,"
> Said Tycho, "for I think, before I die,
> I shall have marked a thousand."
> "To what end?
> When shall we reap the fruits of all this toil?
> Show us its uses."

> "In the time to come,"
> Said Tycho Brahe, "perhaps a hundred years,
> Perhaps a thousand, when our own poor names
> Are quite forgotten, and our kingdoms dust,
> On one sure certain day, the torch-bearers
> Will, at some point of contact, see a light
> Moving upon this chaos. Though our eyes
> Be shut for ever in an iron sleep,
> Their eyes shall see the kingdom of the law . . . "

Though my father was an ardent admirer, he had never actually read *The Torch-Bearers* until I managed to find a copy, which I presented to him in 1970. At about that same time, he began the process of winding down his private law practice, so as to be able to fully devote himself to work on criminalizing the illegal use of force. In doing so, he left behind the New York offices that he had shared for many years with Telford Taylor, who, in a prior life, had appointed him Chief Prosecutor of the *Einsatzgruppen Case* at the American-led subsequent proceedings at Nuremberg. In need of a new office, he had one constructed as an adjunct to our family home in New Rochelle. He spent so many hours of seclusion in research and writing there that one morning a handwritten notice mysteriously appeared, taped to his office door. It had been written and surreptitiously affixed there by my eldest sister, Keri, and it remains there to this day. It said simply: "Here lies Tycho Brahe *ad infinitum*" – and, as my father's Epilogue to this volume (written in his ninety-seventh year) bears witness, the *ad infinitum* characterization wasn't too far off the mark.

To help advance the effective rule of law, my family established the Planethood Foundation in 1996. Together with the Whitney R. Harris World Law Institute, the foundation co-hosted a 2015 symposium at Washington University School of Law in St. Louis entitled "The Illegal Use of Force: Reconceptualizing the Laws of War." This treatise is a by-product of that symposium, and is intended to help move forward the discussion of how developments within the law may advance prospects for a more humane and peaceful world. In bringing it to press, the efforts of Professor Leila Sadat have been paramount, and we would like to express our sincere gratitude, not only to her, but also to each of the contributing scholars whose submissions are included herein.

As for Tycho, when support from the Danish Court dried up, he took what instruments he could to Prague, where, from 1599 until his sudden death two years later, he worked under the auspices of Rudolf II, the Holy Roman Emperor. As a consequence, his cherished star charts came to be known as

the Rudolphine tables. They were published in 1624 by Johannes Kepler, who had assisted Brahe in Prague and who relied on their data in developing his groundbreaking laws of planetary motion – a milestone that is still considered among the most brilliant advances in all of science. The torch had been passed, and, by its continued passing, achievements that once seemed inconceivable now regularly unfold within the realm of the possible.

Tycho's observatory at Uraniborg has long since crumbled to decay, yet the flame of his example can still be seen in the constellation of those whose torches of insight and learning light a path forward to the kingdom of the law.

Donald M. Ferencz
January 11, 2017