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In the Shadow of Gotham

Reader's Guide by Stefanie Pintoff

Discussion Questions

1. A key element of the novel is the relationship between Detective Ziele and Alistair Sinclair. Despite the obvious tension between the two, they need each other to solve the brutal murder that is at the center of the book. Yet, how is their budding partnership much more than one borne of necessity?

2. Another relationship core to the novel is that between Detective Ziele and Isabella Sinclair. While there is clearly an attraction between the two that is greater than mutual admiration, it is harnessed by the social dictates of 1905 New York and the awkwardness of Isabella's relation to Alistair. Discuss whether their attraction is authentic or masked by the tragic losses each has experienced in their recent pasts?

3. Detective Ziele has seen more than his share of tragedy. How have these events shaped him into the man he is in the novel?

4. On page 72 of the novel, Alistair explains the science of criminology in layman's terms:

   "Criminals are best understood through their crimes," Alistair clarified with a slight smile. "But you can flip it around, and say that crimes are best understood through criminal behavior at the crime scene."

   It is this premise that is the focus of Alistair's studies at his Research Center at Columbia University. Discuss the impact of Alistair's knowledge of criminology in the murder investigation into Sarah Wingate. Does it help them to solve the crime? Or, is it an impediment to Detective Ziele's preference for tried and proven investigative methodology?

5. There are two very strong women at the center of the novel—Sarah Wingate, a brilliant young mathematician and Isabella Sinclair. Yet, they exhibit their strength in very different ways. Sarah is bold, a thought leader in a man's field, and not willing to keep in step with society's dictates. On the other hand, Isabella prefers to stay within accepted boundaries. But, her inner strength is no less remarkable. Discuss the differences between the two women and their roles in advancing women's issues at the turn of the century.

6. The ethical dilemma at the heart of the novel is best described on page 200.

   "I need to know just one more thing," I said quietly. "Had you known about Moira Shea from the beginning, would you still have facilitated the dismissal of charges against Michael Fromley and accepted him into your custody?"

   His answer was important to my judgment of him, for in my mind, the question of his

intent was crucial. Had Alistair made reckless decisions along the way because he had been blinded by the importance of his research? Or was his hubris so large that he believed his own intellectual pursuits were all-important, and the rest of the world be damned?

There was a long moment's pause as I waited for his reply. Finally, he looked at me, and I saw both honesty and fear reflected in his eyes as he replied, "I do not know."

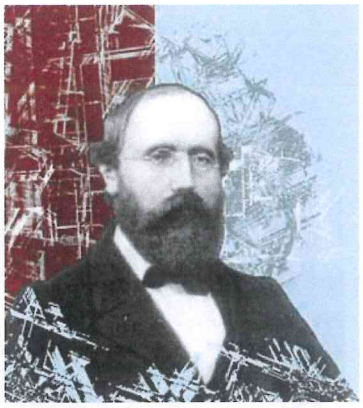
Does Detective Ziele judge Alistair too harshly for his decisions? What would you have done had you been in Alistair's shoes?

7. One of my great joys in writing and reading historical fiction is comparing how the things I take for granted today were so very different, in this case, only 100 years ago. Interesting areas of comparison include: modes of transportation; cuisine; dress; social dictates; technology; and entertainment.

8. Did you guess who the murderer was before he or she was revealed? What led you to suspect the characters that you did?

- Tombs II, 1902–1941, *Manhattan House of Detention*

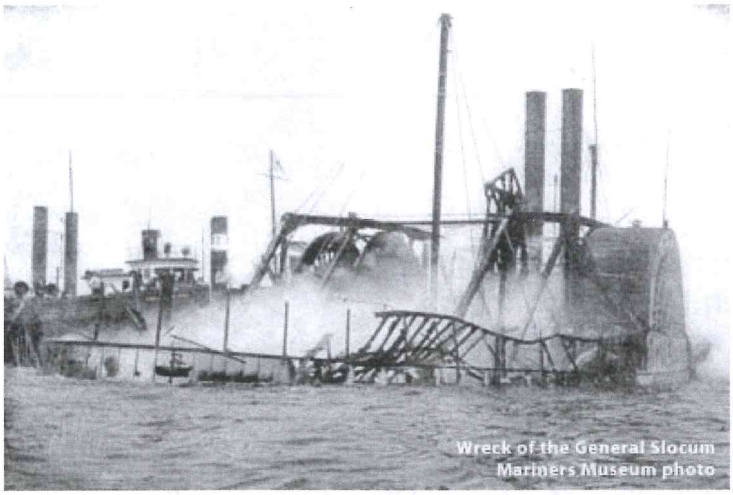
The Riemann Zeta Function

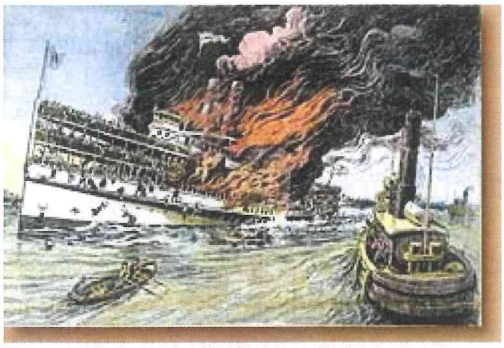


Georg Friedrich Bernhard Riemann

In 1859 Georg Friedrich Bernhard Riemann published his only paper on Number Theory. In this paper Riemann found a function that is identical to Euler's zeta function for values of $s$that are greater than 1, but that is well defined for all real numbers. The Riemann zeta function is actually defined for **complex values** of s, where $s = a + bi$and $i^2 = -1$. Riemann proved that there were many deep connections between his analytically continued zeta function and the distribution of primes. Riemann's intuition was quite remarkable in connecting the properties of a continuous function of a complex variable to the properties of the primes which are real and discrete. More specifically, Riemann showed that $\pi(x)$, the number of primes less than x, is related to the points at which the zeta function is equal to zero - these points are known as the *zeroes of the function*. Riemann found that when $s$is a real number the zeta function only equals zero when $s$is equal to a negative even integer, that is at the points $s = -2, -4, -6, \ldots$But Riemann also found other zeroes of the zeta function, all of which appeared to be on the line $s = 1/2 + bi$. The approximate value for the first of these is at $b = 14.134725$. Riemann conjectured that all the non-real zeroes of the zeta function lie on the line $s = 1/2 + bi$, although he was unable to prove this. The conjecture has become known as the *Riemann Hypothesis* and it is the key to understanding the distribution of the primes. Recent computer-based calculations have shown that at least the first 100 billion zeroes, with non-real s, all fall on Riemann's line. But, as yet, there is still no proof that there are no exceptions to this pattern.

The British number theorist G.H. Hardy relates in his book "A mathematician's apology" that before setting out on his return voyage over the North Sea from Denmark in the 1920s, expecting the crossing to be treacherous, he posted a note to a colleague to say that he had proved the Riemann Hypothesis. Although a staunch and proselytizing atheist, Hardy explained that he had sent the note in order to guarantee that God would not allow him to drown. Because if he had drowned that would mean that proofs had been claimed for both of the two most famous problems in mathematics: Fermat's Last Theorem and the Riemann Hypothesis, but that the mathematician making the claim had died before communicating the proof to anyone else. Fermat's Last Theorem had achieved legendary status amongst mathematicians, because, in the 17th century, the French civil servant and amateur mathematician Pierre de Fermat, one of the greatest figures in the history of Number Theory, had scribbled in the margin of a book that he had a wonderful proof of the theorem, but the margin was too small for him to write it down. The book was a 17th century edition of the classic Greek text on Number Theory written in the first century A.D., Diophantus' *Arithmetica*. Fermat subsequently died, leaving mathematicians to search for 350 years for a proof of the theorem.





The 1904 Hell Gate Disaster

By James Donahue

Irony can be found in the report that over 1000 members of a church picnic excursion perished in a fire aboard the steamship General Slocum as it sailed into a place called Hell Gate on the East River at New York City.

It happened on June 15, 1904. The Slocum, a tired 13-year-old side wheeler under the command of 68-year-old Captain William van Schaick, was charted to take more than 1,300 members and friends of St. Mark's Lutheran Church on a Sunday school picnic at Locust Grove on Long Island Sound.

Within an hour after the Slocum began its ill-fated trip up the river, fire was discovered in a forward cabin where barrels filled with hay were stacked. The hay was used for packing in a shipment of glass a week before, but then carelessly stored in the cabin. It was theorized that a spark from the ship's stack or perhaps someone's pipe started the fire.

Whatever the cause, the General Slocum was quickly turned that day into a floating coffin of fire. Critics later said old disintegrating cork life jackets, rotted fire hoses that burst the moment they were put under pressure, an untrained crew and a failure by Captain Schaick to immediately run the blazing vessel into a nearby river bank contributed to the scope of the disaster.

Smoke and flames were discovered just as the General Slocum was passing Sunken Meadow, adjacent to Randalls Island in the Hell Gate. Witnesses said it seemed that within seconds the entire forward part of the ship was ablaze.

As the passengers, mostly women and children, rushed astern to escape the flames, Schaick failed to slow the vessel. Rather than cut the speed and turn toward shore, or stop to launch lifeboats, the captain maintained full speed ahead. The fire, fanned by the wind of the moving boat, fed on the dry painted timbers of the open deck, turning the ships superstructure into a fiery torch. Passengers and the 85 members of the crew were forced to jump overboard or burn.

Captain Schaick, who survived the fire, later told a board of inquiry that he was waived away from going ashore for fear of setting fire to nearby lumber yards and oil tanks. He said he also knew the river was lined with rocks and his vessel was bound to founder if it struck them.

Schaick drove the steamer directly upstream until it struck bow-on at North Brother Island, near a long-term care hospital facility. Unfortunately, there was no sloping shoreline so the vessel stopped with its burning hull rammed into the island while the rest of the hull still floating in 25 feet of water.

People jumped overboard but were carried away by the force of the rushing river. By now the fire had destroyed any chance of launching lifeboats.

Tugboats and other water craft braved the flames in an effort to save lives. Some patients from the island infirmary were said to have pulled struggling women and children out of the water.

Still burning at its waterline, the ruined Slocum eventually got carried off in the current until it struck land at Hunts Point in the Bronx, about a thousand yards away. There the remains of the wreck smoldered for days. Divers searched for bodies in its sunken remains. Police and rescue workers searched the riverbanks for miles.

The ship's owners, captain and crew were demonized by the press. Captain Van Schaick was sentenced to ten years in prison for his part in the disaster but was pardoned four years later by President Taft.

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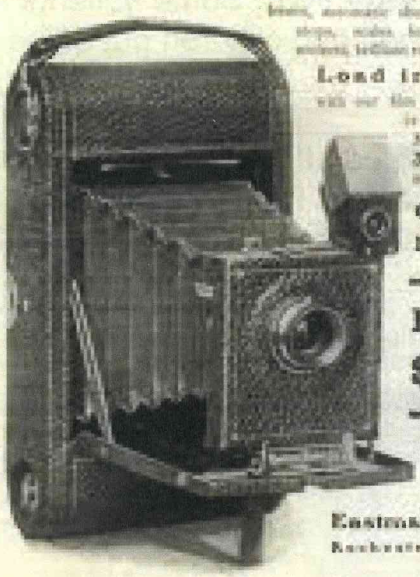

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