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## INTRODUCTION

### NEVER-READ BOOKS

The success of an investigation depends mostly on how skillfully you can make objects talk. Things are born silent and incapable of talking to their inspector, though it would be most desirable if a weapon, for example, could testify against the criminal, the drug could point out its dealer, or money could tell whether its source is corrupt. How convenient that would be!

Books are also born silent. This poses no problems as long as we know their author, who can tell us about the origins, background, content, and purpose of the book. Problems arise when the author is not known. The first decades of the seventeenth century saw brief manifestos published in German spreading information about the mysterious Rosicrucian Brotherhood. Their authors remained anonymous, and nobody could decide whether the powerful Rosicrucian group, which had allegedly been formed to benefit mankind and to reform science, even existed. Yet at least the content of these documents could be identified, even if the authors themselves and their purposes remained secret.

But what if the content is also inaccessible? Think of the ancient writings whose characters, once familiar to highly developed cultures, can no longer be read by anyone today. What about more recent ciphers that were

intentionally encrypted into a string of weird characters and numbers? Or consider the messages coming from space: could they be from intelligent creatures trying to communicate with us, or are they mere background noise of the universe?

Making sense of these texts requires the work of specialists, inspectors equipped with the tools of history, philology, mathematics, and information technology. Historians, linguists, mathematicians, and other experts, spread out in different parts of the world, work on such cases simultaneously but in isolation from one another, only connecting from time to time at conferences to share the results of their research.

Occasionally, it takes generations of scholars and decades of work to achieve a breakthrough, as with the cuneiform writing of Mesopotamia, the Egyptian hieroglyphs, the ancient Greek writing known as Linear B, and the Mayan hieroglyphs. When that breakthrough occurs, however, and the scrawl that survived on a few pieces of papyrus, stone, or clay can finally be read, it opens up whole new worlds to us, telling of extinct cultures, histories, and religions of peoples long forgotten.

Not that persevering historical investigations always yield results. Neither the Linear A writing of Knossos, nor the Phaistos Disk, nor the Rongorongo system of glyphs (written with shark teeth) has yet been decoded. More recent codes, like the enigmatic Voynich manuscript, also remain a mystery. Failure to solve such puzzles generates frustration, which is exacerbated by the nagging feeling that the undeciphered writing may in fact be totally meaningless. The specialist is haunted by the fear that she may be the victim of a hoax, a vicious bluff, and by the possibility that what she considers ancient writing may simply have served a decorative purpose. Understanding the intentions of the author is crucial to identifying the content: did he encode a meaningful message, or was he only trying to make his text look mysterious, and thus more valuable, in the eyes of contemporaries or generations to come? Trying to determine whether a string of characters is random or whether it shows a pattern, the historian reaches for the special methods of mathematics and statistics. But the undertaking is fraught with uncertainty. It would be much easier if the given stone, papyrus, or clay fragment could simply tell us who wrote on it, what it is, and when it was inscribed.

Still, even the most maddening investigations yield some results, however humble. In the early stages of decoding the Egyptian hieroglyphs or

Linear B, important conclusions were reached that served as stepping stones for the people who finally broke the code and gained renown. Although the Voynich manuscript, the Phaistos Disk, and the Beale ciphers remain unbroken (the last supposedly revealing the whereabouts of great treasure), a number of attempted solutions have already failed, which is an important milestone in itself. Most scholars working on an unsolved case gain a degree of satisfaction even when they are unable to find a complete solution. They feel that they have had a great time playing the inspector, and they appreciate what they have learned despite their failure to decipher the unknown text.

This book is about an investigation of a similar kind. It tells the story of a quest, staged in libraries across the world, to uncover the truth about another book and its content. It contains a surprisingly large number of symbols (or are they letters?) and amazingly few combinations (words?). It is richly decorated with images depicting what appears to be Christ in a Gospel-like story.

This investigation has been sometimes invigorating, sometimes frustrating. It has been costly. While pursuing it, I unintentionally became a specialist in a number of issues concerning the history of science, mainly the early modern history of ciphers and artificial languages. In the unlikely case that, tomorrow or next week, someone proves that this book is a hoax, I will not regret the time I have invested in this historical hunt. I have enjoyed virtually every minute of it, and I have learned a lot.

#### A NEGLECTED MANUSCRIPT

The Rohonc Codex is in a paradoxical situation: while privileged to be in the elegant company of the most famous hitherto unsolved writing systems (together with the Phaistos Disk and Linear A),<sup>1</sup> it does stand out from the crowd of other undeciphered writings in that very few professional codebreakers have studied it since it was first discovered in 1838.

The situation becomes particularly striking if we compare the codex with a similar enigma, the (in)famous Voynich manuscript. This book has kept armies of amateur codebreakers, information technologists, and historians on their toes ever since the Polish antiquarian and bookdealer Wilfrid Michael Voynich (1865–1930) bought it in the 1910s from the Jesuits at Villa

Mondragone outside Rome. The book, with its odd drawings of biology, astronomy, and bathing scenes and its incomprehensible structure of writing, has created a whole subculture of codebreakers, who regularly gather at conferences and communicate through special blogs and email lists.

The Rohonc Codex resembles the Voynich manuscript in several respects. Both were written in a mysterious code; both are fairly lengthy (and thus appear to offer themselves as easy prey to codebreakers); and both are equally likely to be ciphers, codes, artificial languages, or forged documents. If each should prove to be a forged document, we will still have to decide in both cases whether the text was forged in the sixteenth century, the nineteenth century, or somewhere in between. And once we have answered these questions, we still need to solve the puzzle of why someone made the effort to forge them in the first place.

The main thing that sets the two texts apart is the level of interest and enthusiasm surrounding them. The Voynich manuscript captured the attention of the best World War II codebreakers, including that of William Friedman (1891–1969), who broke dozens of Japanese military codes.<sup>2</sup> It has been studied by a number of expert historians and philologists. Half a dozen respectable monographs discuss the problems and history of the deciphering process, and numerous web pages and e-mail lists fire fans' enthusiasm.<sup>3</sup> The Rohonc Codex, by contrast, received only a few abortive codebreaking attempts before the year 2000.

What can be known about the codex with any degree of certainty? It consists of nearly 450 pages (see fig. 1). The first and last few dozen leaves were detached from the book, thus rendering the original order of these pages a challenge in itself. There is no title page. The pages are made of paper. The small pages (3.9 × 4.7 in., or roughly 10 × 12 cm) on average contain nine to fourteen lines of characters, and there are ninety-some images altogether. The fairly destroyed leather binding was attached to the pages in the nineteenth century and thus tells us nothing about the early history of the book.

What we know of its history dates back only to 1838, when it was incorporated into the collection of the Hungarian Academy of Sciences as part of the thirty-thousand-book library of the late Hungarian nobleman Gusztáv Batthyány.<sup>4</sup> Since we have no other information about its origin, the codex is named after the town of Rohonc (then a place in western Hungary, today called Rechnitz, in Austria), the Batthyány family seat. However, since the



FIG. 1 | Two pages of the Rohonc Codex. Library of the Hungarian Academy of Sciences, MS K 114, fols. 91r–90v.

Batthyány's amassed their book collection from a great array of sources over several centuries, there is no proof that the codex is either Hungarian or central European in origin.

Soon after it was discovered, the mysterious manuscript garnered considerable academic attention, but only as long as it could be considered a potentially valuable piece of old Hungarian writing. The initial enthusiasm soon died out, giving way to disappointment, skepticism, and suspicion. By the end of the nineteenth century, the academic world had decided to regard it as a forgery, and virtually no serious study was published on it until the turn of the twenty-first century.

#### THE AUTHOR MEETS THE MYSTERY

I stumbled upon the Rohonc Codex through a series of chance events. In 2006 I attended the annual International Congress on Medieval Studies in Kalamazoo, a city in the American Midwest. Every year, two to three thousand lectures are presented during the four or five days of this event and are attended by some four thousand medievalists altogether.

I attended a sizable book fair at this conference and noticed a book on the Voynich manuscript that seemed fairly reader-friendly. I didn't know much about this enigmatic manuscript, but a Canadian friend who did talked me into buying the book. I found it so intriguing that I couldn't put it down for the entire length of my nine-hour flight back to Frankfurt.<sup>5</sup>

A couple of weeks later, while on a family vacation in a small Hungarian village, I was again reading the book. A historian friend of mine happened to visit us there, and seeing me with the book on the Voynich manuscript, she casually mentioned that the library of the Batthyány family, her own particular research field, contains a similar enciphered manuscript that nobody knows anything about. She must have been surprised to hear, three months later, that I had spent virtually all of the time since her visit studying that manuscript, the Rohonc Codex.

The months that followed were a period of intense highs and lows: I was either totally devoted to breaking the code or simply reading up on ciphers in general. My previous research topic, medieval manuscripts on magic, had lost its appeal entirely. (To be honest, it only sounds exciting to lay-people. Scholars of magic know that their work is just as tedious as the job of studying, say, the "traditions of inheritance of the noblemen of a French county in the fifteenth century, especially the female heirs.") I got a taste of what it was like not only to be interested in a research topic but to be deeply committed to solving a puzzle. I was enthralled. My friends began to worry about me. I visited museums across western Europe, studying biblical scenes engraved in ivory or depicted in breviaries. I spent three months in Paris at the Sainte-Geneviève Library and the Bibliothèque nationale, looking for stenographies (i.e., shorthand systems), code symbols, and artificial-language schemes. In my studio apartment a few streets from Notre Dame, I spent many nights compiling statistical analyses and running vowel tests on the script, until the characters of the codex would begin to dance before my eyes. I became disillusioned at times, to the relief of my worried friends. I despaired of getting to the bottom of the codex, of determining once and for all whether it was a hoax. When my chances of success looked dim, I promised myself that I would at least write an article on my research, and I did just that. Then I wrote another article. Then a paper in an international journal on cryptology.<sup>6</sup> Finally, I wrote this book, describing the mystery surrounding the Rohonc Codex as well as the story of my investigation.

This book does not follow a linear chronology, because I worked in parallel on the different stages of the quest in libraries in Budapest, Chicago, Paris, and the Vatican. Instead, it presents my findings in a logical order. My first task was to rule out the possibility that the codex is a mere hoax, because this would render pointless any attempt to solve it. Second, I had to study earlier attempts to break the code in order to avoid the common mistake of self-appointed codebreakers who fail to consult the work of their predecessors and end up reinventing the wheel. One primary feature of the codex is that it is heavily illustrated, and its images might provide clues that could lead to a breakthrough; thus the third step was to analyze these illustrations. Historians and philologists are always looking for historical contexts and analogies for the sources they examine, and that is why the fourth task of this study is to look at how the Rohonc code fits into the matrix of ciphers, stenographies, and artificial languages of the past—these parallels might help identify a successful codebreaking method. Finally, I show how such mysterious strings of signs and symbols might be decoded according to the deciphering conventions of other ciphers and codes, and—in conclusion—I put forward a solution to the Rohonc Codex that appeared just as I was finishing my own research.

This book attempts to achieve a number of goals. First of all, I would like to share all there is to know about the Rohonc Codex at present. Second, I would like to illustrate the work of historians—their tools, methods, and research scenarios. Their lives are far less boring and dusty than the public imagines them to be, though not quite as thrilling as Dan Brown makes them out to be, either. Third, I hope to entertain the reader, which for me is a joyous task, for this is a gripping story of a puzzling codex and my attempt to solve it once and for all.