

Astronomical Chess from 'Libro de los juegos'



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Project Overview

The purpose behind this project was to represent several major elements of Alfonso the Wise's rule. Taking inspiration not just from his patronage of the sciences and contribution to early spanish literature but also the itinerant nature of his court, I did my best to recreate a game board suitable for playing astronomical chess that would be easy to travel with and pack down.

After researching some period options (painted leather, egg tempera or oil on canvas) I determined that the best and easiest way to achieve what I wanted would be to use modern materials. With acrylic paint and fabric medium I painted the game board onto a sheet in to create a table or floor cloth that could accommodate 7 players for a game of astronomical chess

Reflecting on the project most of my complaints have to do with aesthetics. I would have preferred to use a more period material like wood or leather but I don't have the skills to work with those materials and achieve something with the qualities I was looking for. In the future if I were to revisit the project I would increase the scale of the board and decrease the size of the fabric. While convenient the sheet was too large, I think a canvas drop cloth might have been a better choice with more flexibility.

Rules of the Game

It might be more accurate to describe astronomical chess as astrological dice throwing. Played somewhat like a cross between dice and monopoly, players win or lose money based on their positions to other players on the board.

Inside the seven sides of the board there are 12 concentric circles representing the geocentric model of the universe. From the outside and moving inward, these are meant to represent:

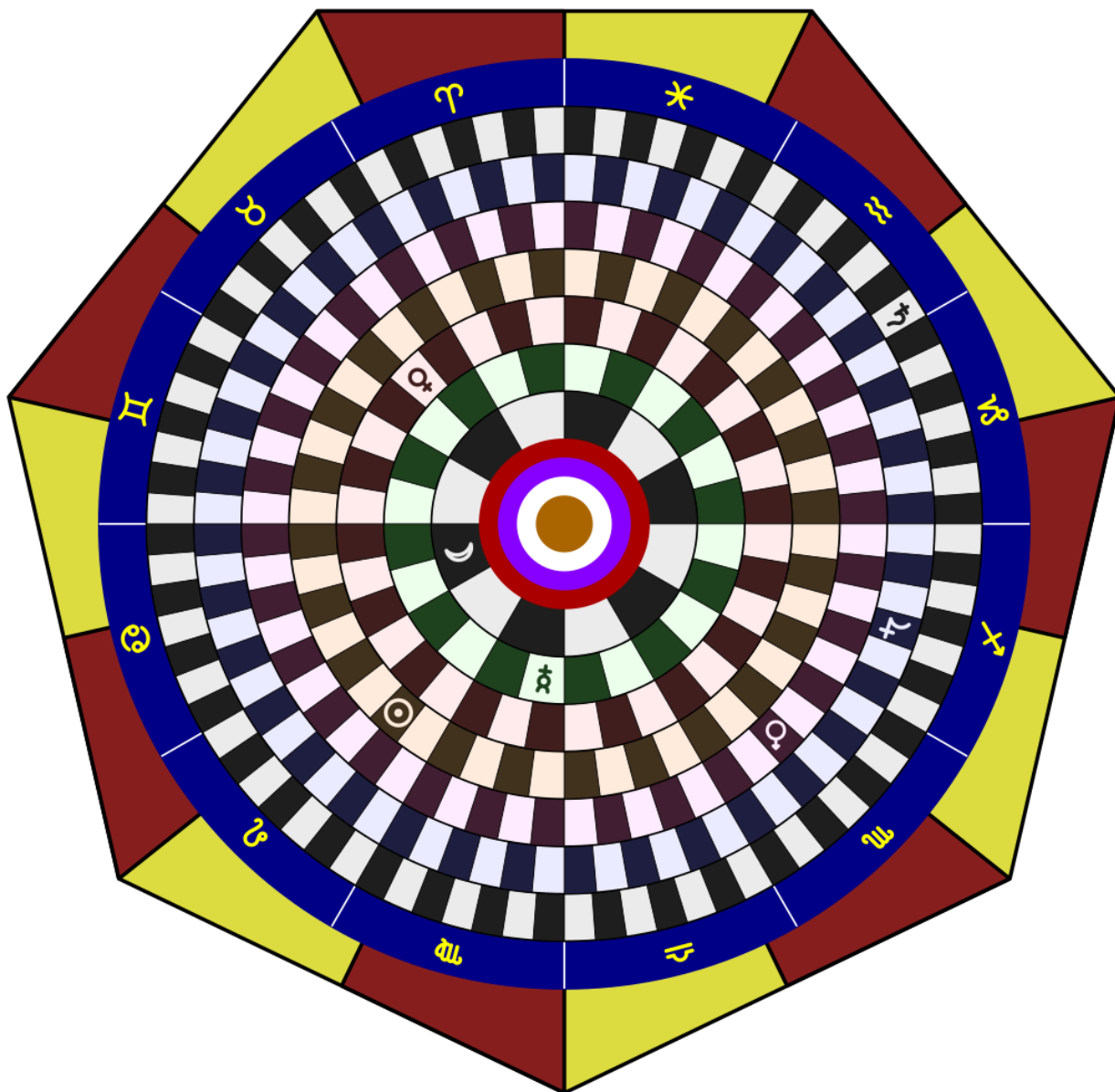
- I. The stars, given by the 12 symbols of the zodiac
- II. Saturn, with 84 (12×7) spaces of alternating color
- III. Jupiter, with 72 (12×6) spaces
- IV. Mars, with 60 (12×5) spaces
- V. The Sun, with 48 (12×4) spaces
- VI. Venus, with 36 (12×3) spaces
- VII. Mercury, with 24 (12×2) spaces
- VIII. The Moon, with 12 (12×1) spaces
- IX. Earth: fire element as a single red ring
- X. Earth: air element as a single purple ring
- XI. Earth: water element as a single white ring
- XII. Earth: earth element as a brown circle (gold on the board I painted)

The symbols of the zodiac are arranged like a clock face, the sign Aries between the 11 and 12 positions, moving counterclockwise to Pisces at 12—1. Each zodiac sign contains 28 spaces, representing a lunar calendar as well.

Each player is assigned a piece by rolling a seven-sided die; the piece personifies a different heavenly body, starting at a specific constellation within that orbit, as marked on the board

- ❖ The Moon in Cancer
- ❖ Mercury in Virgo
- ❖ Venus in Taurus
- ❖ The Sun in Leo
- ❖ Mars in Scorpio
- ❖ Jupiter in Sagittarius
- ❖ Saturn in Aquarius

There is no image of the 7 sided die that I could find. I imagine the die would need need to have a have an even number of sides with a multiple of 7, like a d14, in order to work properly



A clearer image of the game board

In 'Libro de los Juegos', the players first roll the seven-sided die to determine who goes first, then each rolls the die again to determine the number of spaces they move, counterclockwise, within their orbit. If the player stays within a zodiac section, they do not win or lose any money. When they enter a new section, depending on how closely they approach the positions other players, the player may be required to pay or receive money from other player(s):

- ❖ Sextile: (another player is two zodiac signs away), player wins "two of twelve"
 - ❖ Quadrature: (another player is three zodiac signs away), player loses "three of twelve"
 - ❖ Trine: (another player is four zodiac signs away), player wins "three of twelve"
 - ❖ Opposition: (another player is six zodiac signs away), player loses "six of twelve"
 - ❖ Conjunction: (another player is in the same zodiac sign), player loses "twelve of twelve"
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‘Libro de los Juegos’ and Courtly Culture at Alfonso X, el Sabio’s Court



King Alfonso X ‘the wise’ of Castille y Leon

The *Libro de los Juegos* was completed in Seville in the year 1283, only a year before the death of King Alfonso. Like many of the works from Alfonso’s reign, it was written in vernacular Castilian rather than Latin. The manuscript is clearly a luxury book, likely meant for Alfonso’s personal use. An instructional book for games of skill (chess), chance (dice), and tables, the *Libro* can also be read according to some researchers as an allegorical guide for leading a balanced, virtuous life. Unlike some similar works from around the same time, the text describes chess problems and games rules without a moral framing but instead uses an astrological context.

The folios include over 150 illuminated pages, depicting Alfonso’s court as diverse and cosmopolitan. Images show people of many races and both sexes playing chess and other games. Muslims, Christians, Jews; men and women; nobles, servants, and clerics;

Europeans, Asians, and Moors are all shown. The overall text was seemingly inspired by Islamic manuscripts as many of the solutions to the chess problems in the book appear in earlier texts.

This diversity extended to the works commissioned by the King as well. Along with commissioning new histories and legal works, Alfonso had Arabic and Ancient Greek and Roman scientific texts translated. Some of the first Spanish translations of the Quran, The Talmud and Kabbalah were also sponsored by the king.

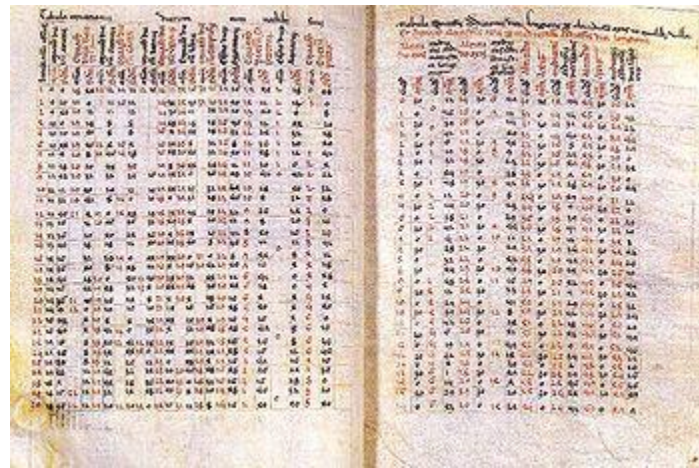


Alfonso X from the codex Tumbo A' de Santiago

Science and Astrology in 13th Century Spain

King Alfonso's contributions to scientific literature have earned him the epithet of the '*Father of Spanish Science*'. Many of the translations and scientists he sponsored were astronomers, earning him another nickname, the *Astrologer*. He sponsored and gave his name to the Alphonsine Tables, a set of astronomical tables that provided data for computing the position of celestial bodies relative to the fixed stars. These were mostly used for

astrological predictions in Alfonso's time, but these tables later provided the basis of Copernicus' work on heliocentrism.



Alfonsine Tables

Sources

Constable, Olivia Remie. "Chess and Courtly Culture in Medieval Castile: The 'Libro de Ajedrez' of Alfonso X, El Sabio." *Speculum*, vol. 82, no. 2, 2007, pp. 301–47. *JSTOR*, <http://www.jstor.org/stable/20464089>. Accessed 1 Apr. 2025.

Procter, E. S. "The Scientific Works of the Court of Alfonso X of Castille: The King and His Collaborators." *The Modern Language Review*, vol. 40, no. 1, 1945, pp. 12–29. *JSTOR*, <https://doi.org/10.2307/3717746>. Accessed 4 Apr. 2025.

Parlett, David. *The Oxford History of Board Games*. Oxford University Press, 1999.