

Analysing the Man of Signs: A Study on the Changes of the Linguistic Elements and the Contexts of the Zodiac Man Figure in Early Modern Almanacks (1537–1603)

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This thesis examines 48 English Early Modern printed almanacks. The material dates from 1537–1603 and is gathered from *Early English Books Online*. The purpose of this thesis was to analyse the language, contents, and visual elements of the Zodiac man woodcut and its immediate vicinity in order to find out in which contexts does the image appear and the development of the said features in the almanacks of the sixteenth century.

Luborsky and Ingram's *A guide to English Illustrated books, 1536–1603* (1998) lists and visually classifies numerous almanacks from the sixteenth century. I discuss the applicability of the classification system and in addition give the contents both textual and topical labels in the style of Suhr 2011. I also examine the languages and astrological and zodiacal terminology in the materials with the help of the *Oxford English Dictionary*, and look for patterns and diachronic development of all of the aforementioned categories of features.

There were no clear diachronic tendencies in terms of language choice and linguistic feature there were minimal number of patterns and diachronic change. That being said, the visual elements suggest that during the sixteenth century there was a notable shift towards more general contents and both simplicity and versatility in the visual aspects. The results also point to a relationship between verbal and visual elements: the contexts determine the themes to an extent.

Key words: Astrology, Almanack, Early Modern English, Illustrations

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List of abbreviations

EEBO Early English Books Online

OED Oxford English Dictionary

STC English Short-Title Catalogue

OE Old English

ME Middle English

EModE Early Modern English

n. Noun

adj. Adjective

1 Introduction

This study focuses on the changing linguistic elements and contexts surrounding the distinct woodcut image of the naked male figure called the Zodiac man through the sixteenth century and the very beginning of the seventeenth century. This period of time (c. 1500–1700) is often addressed as Early Modern English in linguistics (e.g. Nevalainen 2006, 1). The evolution of the printing press brought not only the processes of standardisation upon the English language, but also the mass production of printed literary works: despite its popularity, the almanack is a fairly understudied piece of literary history compared to for example the numerous studies on Shakespeare's works (see e.g. Nevalainen 2006 or Peck 2019). While the Zodiac men are often discussed in art and layout related contexts (especially in the Medieval period), I wanted to study the linguistic elements and the contexts in which the woodcuts were published in the Early Modern period instead. In other words, do the illustrations contain only Latin terminology and do they serve purely an illustrational purpose (sometimes the author or scribe even states that this image has nothing to do with the text and is just decoration) or is the figure there to give the reader some kind of additional information regarding for instance medical procedures or the upcoming weather? There are two aims to this thesis: firstly to try and identify patterns in the contents and language choices in the immediate context of the Zodiac men in the Early Modern printed almanacks of the sixteenth century, and secondly to look at the development and possible changes in the contents and language throughout the sixteenth century. This will be done in order to find out whether there is any context-dependent or diachronic variation or change.

The Zodiac man is a naked male figure found in many manuscripts, almanacks, books of hours (a type of a prayer book; Clemens & Graham 2007, 209), lunaries (prognostications based on the position of the Moon; Means 1992, 376–385), and electionaries (selecting an astrologically appropriate date to do something; Means 1992, 370–375) (Clark 1982, 13). The figure indicates the parts of the body ruled by specific signs of the zodiac. The image was used as a quick reference by the commoners and also farmers and physicians in order to find out the correct time for example bloodletting, planting, or surgery among many other practical purposes (*ibid.*). Of all other published works of the time, the printed almanack was by far the most popular due to the cheaper production process and the scope of contents rendering it a necessary item in many Medieval households (Mooney 1997; 11,18). The popularity of the printed almanacks makes them a perfect source for research of a time where there were no

newspapers as of yet: this was a widely sold yearly publication catering to a vast population (see e.g. Peck 2019, Capp 2008). The recognisable image of the Zodiac man is found in almost all of these prints, so researching the illustrations and the textual and linguistic contexts surrounding them is not only feasible but also interesting in the way that you can follow the evolution and the variation of the contents throughout the sixteenth century.

Studying the relationship between visual and textual elements has recently been accentuated in the linguistic field (e.g. Varila et al. 2017, 3). The communication through layout can be understood as a field of engagement (Varila et al. 2017, 6): engaging the readers from various literacy levels through highlighting salient or prominent features and including detailed woodcut imagery with explanations and observations in the paratext increases the interaction of the readers with the text thus making it more approachable and available to the masses. Studying this phenomenon throughout the sixteenth century through the development of the Zodiac man illustrations and the features of the text surrounding it could give us interesting information as the printed almanack was one of the first popular printed pieces of literary circulating among the masses in England. Looking at both the visual presentation and the material context is a bit more recent occurrence in the linguistic field (Varila et al. 2017, 17), making this study relevant in the field.

The materials, Early Modern English printed almanacks, were collected from an online database. The methodology is a mixture made with combining earlier research from Luborsky and Ingram (1998; visual classification of the Zodiac man illustration), Suhr (2011; textual and topical labelling), and Ratia and Suhr (2017; textual and topical labelling). Early English Books Online (EEBO) is a database containing multiple pieces of printed literature circulating the British Isles and North America from 1470–1700 in page images, mostly scanned from microfilm. Using the English Short-Title Catalogue numbers (henceforth STC number) given for cataloguing purposes provided in the appendix of a book by Luborsky and Ingram (*A Guide to English Illustrated Books, 1536–1603*; 1998) I was able to gather a good sample of Early Modern printed almanacks and the Zodiac men in them. With the help of Tropy, free research software, I grouped and classified the 48 specific almanacks in readable condition containing a specific type of woodcut illustrations of Zodiac men. I built my classification on top of Luborsky and Ingram's 1998 illustration-based categorisation methods, adding textual and topical labels (in the style of Suhr 2011) and information regarding language choices to the metadata of the images on Tropy. The aim of this study is to get a comprehensive overview on the evolution of the Zodiac man illustration throughout the Early Modern period

in England and the changes in the languages and contents relating to the woodcut: how does the context of the publication (e.g. medical, astrological) affect the contents of the immediate context of the Zodiac man. In addition I will see whether there is any diachronic variation or change.

Chapter two provides an overview on the historical backgrounds of the Zodiac man and the printed almanacks in Early Modern England: the chapter introduces Medieval and Early Modern Astrology, giving some background information on the belief systems that influenced both the contents of the almanacks and the birth of the Zodiac man illustration. It also introduces the origins of the Zodiac man, its prototypical elements, and the purposes of the figure while briefly discussing the ruling patterns and page design of Medieval manuscripts to draw comparisons to the contents and production processes of printed almanacks. This section also introduces earlier research that served as an inspiration to this study (Witherden 2017; Peikola & Varila 2023; Suhr 2011). Chapter three discusses the Roman calendar which was the predecessor of the printed almanacks to draw comparisons between the two and to give historical context to the latter. It also introduces the typical contents of the Early Modern almanack, and gives an overlook of the early printing processes and woodcut images to give some background on the making of the almanacks and to discuss the opportunities that the cheaper and faster production offered in terms of marketability and distribution. Comparisons to manuscript production and discussion of the linguistic features of Early Modern English, especially vernacularisation and borrowing/loaning as phenomena, are provided here also. Chapter 4 introduces the research materials and methods, discusses Early English Books Online and the material collecting process, and introduces the Luborsky and Ingram 1998 book which greatly inspired this study in more detail. I also introduce Tropy here and describe how I used the software to manage and classify the research materials. Chapter 5 discusses the analysis, results, and limitations of this study. Finally, chapter 6 summarises the findings.

2 The Zodiac man

In this chapter I will introduce the field of Medieval and Early modern astrology in 2.1 to give some context to the belief systems that eventually heavily influenced the contents of the almanacks and the birth of the Zodiac man figure. In 2.2 the historical background of the Zodiac man and the typical purposes for which it was used are discussed, in addition to going through the quintessential elements of the naked male figure which is covered in superimposed images and names of the astrological signs. In 2.3 I talk about the page design, ruling patterns and multimodal practices of Medieval documents for comparative reasons as well as introducing a few inspirational studies more in-depth including a very recent 2023 article.

2.1 Medieval and Early Modern Astrology and belief systems

The complex, scientific system of explanations, that is astrology, was born out of the inability to understand the world we live in (Capp 2008, 15). Studying the stars was very useful in the Medieval and Early Modern times for agricultural life: it helped people in figuring out the time of the day and the change of seasons (Schmitz-Esser 2015, 121). Medieval astrology can be further divided into natural astrology and judicial astrology: natural astrology investigated general planetary influences and judicial astrology interpreted these influences on a more practical level, predicting and advising through lunaries or horaries (prognostications based on the position of the moon, usually regarding personal problems), nativities or destinaries (birth-charts, horoscopes based on person's time and place of birth), questionaries (a prognostication concerned only with a specific question), and electionaries (choosing the astrologically right moment to carry out a certain action e.g. phlebotomy, treating an illness) (Capp 2008; 16, 205; Means 1992, 370–402).

The Medieval astrologer attempted to systematically explain the natural phenomena by the changes of seasons and sun's movements and otherwise interpreting the heavens, as well as to predict consequences of the changing relationships of the planets through the signs of the zodiac (Capp 2008; 16, 205). Each planet was thought to have been governed by a zodiac sign, and a common belief was that these signs dominated different parts of the human anatomy as reflected by the image of the Zodiac man (Luborsky & Ingram 1998, 114). The planets were thought to be related to humans because they both possessed the four qualities of the elements: heat of the fire, cold of the earth, dryness of the air, and the moisture of the

water (Capp 2008, 16). These were also closely linked to the four humours, bodily fluids that were thought to be running through a person's veins and the imbalance of which could lead to certain behavioural patterns: too much phlegm and you turn phlegmatic (Bober 1948, 8). Blood was related to air, phlegm to water, melancholy or black bile to earth, and choler or yellow bile to fire (Capp 2008; 16, 204–205).

Another prevalent scientific discipline of the Medieval and Early Modern times was astronomy. Astronomy was much more 'scientific' if you may: an intricate computational approach producing geometrical models and mathematical algorithms for calculating planetary motion (Chabás & Goldstein 2015, 1). Astronomers also calculated eclipses through many steps including determining sun's position in relation to Moon and then using multiple tables to complete the solutions (Chabás & Goldstein 2015, 9–10). The use of tables can actually be said to have been the most popular way of presenting mathematical and astronomical information in the Medieval and Early Modern times (Chabás & Goldstein 2015, 1). This could explain why many of the Zodiac man illustrations are accompanied with tables of sorts: tables were the most practical way of presenting information in a cost-efficient way. In Medieval and Early Modern sciences, however, it was hard to make a clear distinction between the two as the separation of the concepts is modern, meaning that there was no clear difference between the two initially (Schmitz-Esser 2015, 120). As the universe was thought to be created by God, naturally the forces that moved the stars were thought to have influenced human existence as well (*ibid.*).

These man-made connections and theories between above and below were born out of Stoic and Platonic beliefs: analogies between heaven and earth, and celestial events and human fortunes were forged in order to better understand the cosmos, human anatomy, and bodily functions (Clark 1982, 15–16). Astrology and astronomy were central parts of Medieval and Early Modern culture as cosmographic concepts were strongly linked to the belief systems back then: all available information in e.g. geography, political theory, and religious otherworld were linked to cosmography (Schmitz-Esser 2015, 128). Astrology was in a central position in the Medieval mindset as its interdisciplinary nature covered practically all areas of not only science and research but also mundane work (Means 1992, 369).

Astrological prognostications and other omen texts served as means to comprehend humans' place in the universe by searching for connections in e.g. political and meteorological events: it was believed that the man was made of the same elements as the cosmos (Clark 1982, 14–16). As the man was composed of the same materials as the universe, there needed to be this

sort of innate sensitive relationship between what goes on in the heavens and what happens on earth (Clark 1982, 21). Imagining these kinds of relationships between man and celestial events is apt to creating this level of “heretical” worshipping of body members (ibid.). Clark suggests that this reawakening interest in microcosmic-macrocosmic analogies in the twelfth century among physicians and theologians was part of the reason for the increased interest in astrology and medical astrology as well: humans were thought to be created as an image of God, sort of miniature universes within in themselves (Clark 1982; 21, 27).

Some astrologers were also physicians due to this close link of astrology and medicine: hence the necessity to possess an almanack including anatomical information and ailments as an astro-physician (Capp 2008, 17). Besides medical services, astrologers also provided the monarch and the nobles astrological advice regarding e.g. rebellions or war, although political speculation was sometimes considered offensive (Capp 2008; 18, 68). Astrology and especially astronomy were also strongly connected with mathematics, as you needed calculations e.g. to determine the positions of the planets (Capp 2008, 19). Astrologers thought that essentially God causes the stars to operate by divine permission inclining man’s will and linking astrology with also Christendom, and in fact many astrologers were churchmen themselves (Capp 2008, 17). But claims of heretical worship of body parts and calculating Christ’s nativity chart ultimately ended up sparking hostility from the Clergy’s part (Clark 1982, 21; Capp 2008, 132-133). From the Clergy’s perspective the idea that there is something linking human life with the heavens challenged the concept of God given free will (Schmitz-Esser 2015, 120; Bober 1984, 3).

A much-copied manuscript work of the Medieval and Early Modern times was the *Wise Book of Philosophy and Astronomy*, which was widely circulated and served as a framework for understanding the ways in which the universe and the heavens influenced human life on earth (Griffin 2019, 113–114). The materials covered resemble a lot of the information provided by the printed almanacks also in the sense that the information was gathered and organised (Griffin 2019, 124). The contents included an enumeration of the heavens and the planets, the zodiacal system, a debate on free will, an explanation of the four elements, planetary reign, and nativities (Griffin 2019, 113–114; Krochalis & Peters 2011, 3–17). In the book, the author implicates that it contains the teachings of “the wisest philosopher ever known”, and he appears to be an Englishman who has lived in Greece (Krochalis & Peters 2011, 3). The book catered to a vast, variable audience and the contents fluctuated from basic-level knowledge to deeper philosophical issues (Griffin 2019, 117–118). Interest in the *Wise Book* was

diminished however probably due to the availability of the almanacks, considering the similarities in the contents and the fact that the Wise Book was hand-produced despite the arrival of the printing press in England (Griffin 2019; 121, 123).

The rise of scientific methods and empirical sciences was one of the reasons behind the fading popularity and eventually inevitable deterioration of scientific astrology in seventeenth-century England, until this the country was considered in Capp's words, "an astrological backwater" compared to the Continental Europe (Capp 2008; 180, 184). Experimenting became popular and there was no scientific way to measure planetary influence on life on earth, so there was a detectable transitioning from astrology towards astronomy (Capp 2008; 184, 191). Methodical studies underwent a shift regarding standards and models as scientific developments outgrew Medieval sciences (Willard 2015, 103). Perhaps this kind of abandonment of divinity in sciences lead ultimately to the division between astrology and astronomy, as astrology was so connected to believing in celestial powers, whereas astronomy was later considered more empirical and mathematical. What is noteworthy however is that astrology was not labelled as a pseudoscience until the nineteenth century (Willard 2015, 103). The development of medical theory and practice meant shifting traditional methods reliant on astronomical assumptions (humours, the Zodiac man) to the background (Capp 2008, 204). This reduced intellectual and social standing of astrology as a respectable science was also at the root of the decline in the almanack's popularity by the eighteenth century, a century which could be regarded as the end of the almanack as it was due to changes in the contents and purposes (Capp 2008, 238). In the following section I will discuss the historical origins of the Zodiac man figure that can often be found in the almanacks, what it usually looked like, and what it was used for.

2.2 The origins and purpose of the Zodiac man

The Zodiac man, also known as the Man of Signs, the Lord of the Signs, the Anatomical Man, or the Microcosmic Man (Clark 1982, 13) or as the Homo Signorum (Bober 1948, 15) is an illustration of a naked male figure, usually with his legs and arms spread apart, commonly found in many Medieval, Early Modern, and Renaissance manuscripts and almanacks (Clark 1982). The figure reflects the Medieval and Early Modern belief in the domination of the zodiac figures over different parts of the human anatomy (Luborsky & Ingram 1998, 114). The man has the twelve images or names of the zodiac signs, usually in English or Latin in English sources, either drawn or written all over his body (Clark 1982, 13). The relation of

moon to the sign governing the body part in question had to be confirmed to be astronomically right, because it would be dangerous or even fatal to treat a body part if the moon was in its zodiacal sign (Bober 1948, 10). Because of the adaptability of the image, it is found in most almanacks with varying intentions of use: if not directly related to astrology or medical texts, then purely as illustration.

The image of the Zodiac man is often accompanied with a brief explanation of the zodiac signs and their influence (e.g. “Aries is a hot, manly sign of the day causing roughness and a crooked body with short ears and a long neck”; Mooney 1997, 19), but is also very versatile in use: it could be followed with a list of good days to plant, bathe, sow, or cut nails (*ibid.*; Bober 1948, 7). It could also be found without supplementary text at all (Witherden 2017, 80). These images were often used as a quick reference even by surgeons or physicians to determine the correct timing for bloodletting, surgery, or administering ailments or medicine (Clark 1982, 13). In manuscript context it appears that in most cases where the Zodiac man appears, he is accompanied with medical or astro-medical texts (Bober 1948, 17; Witherden 2017, 80). However, they could also appear e.g. among information about the seasons (Mooney 1997, 13). In almanacks it seems that the surrounding contexts could be of more variable nature. This context could include tables of planetary hours, angles of the moon, and tables of eclipses for the more experienced user (Mooney 1997, 15).

The roots of the Zodiac man are ultimately in the ancient Egyptian and Assyro-Babylonian (and later on Greek) treatises and beliefs on that certain body parts were ruled by deities or demons (Clark 1982, 14–17). While the beliefs that this imagery is based on might be of Arabic, Greek or Byzantine origins, the image itself is purely a product of the West (Clark 1982, 37). The first surviving image of an early Zodiac man can be found in an eleventh-century manuscript (Paris, Bibl. Nat., MS Lat. 7028, f. 154r.) containing medical texts and works of Isidore of Seville among other miscellaneous things. Isidore wrote about the harmony of the universe, seasons, and the humours, so the context of use can be thought to be quite similar to the likes of fifteenth- and sixteenth-century counterparts (Clark 1982, 23–24). According to Clark, many researchers (e.g. Bober 1948, 14) have mistakenly identified the central figure to be Christ himself, but with modern understanding and closer inspection the central bust can alternatively be thought to represent the God of the Sun, Helios (Clark 1982, 24). In the middle of the illustration there is a man, either Helios or Christ, with rays of sun as a halo and the figures of the zodiac surrounding him. There is also text in the image relating the signs to different anatomical parts. In the corners there are figures holding plants or seeds

depicting different seasons. These types of figures holding vegetation could also be interpreted as the vegetable complements to animal life in the microcosm (Bober 1948, 14). In other words, it could also be reflecting the microcosm/macrocosm beliefs of the Medieval times. None of these earlier illustrations, however, display a clear connection between the zodiac signs and body parts (Clark 1982, 25). Clark suggests that the imagery, where the signs were drawn or written on the man's body were born later on out of the practical need to identify which signs govern which members of the body at a glance for astro-medical purposes (*ibid.*). The next subsection discusses earlier research that inspired this study, especially Witherden 2017 in more detail.

2.3 Analysing visual elements in Medieval and Early Modern documents

Sian Witherden has done research in 2017 of the ruling patterns with which scribes set the layout of Medieval manuscripts. In this study, Witherden examines the balance of form and function in ruling patterns in an attempt to contextualise the extent of variation in the composition (Witherden 2017, 79–80). Witherden writes about astro-medical manuscripts in which scribes used both paper and vellum and also the help of pricking and ruling. It is the process in which scribes used to prick holes in the edges of the pages with a sharp object or tool and with these holes guiding them they were able to draw (rule) the places of intended columns and lines in order to achieve an aesthetically pleasing page design for the document (Clemens & Graham 2007, 15–17). The work cannot be applied straightforward to this thesis as almanacks were printed on paper and in printed documents ruling and pricking were replaced by setting the type. Instead it serves as an inspiration for this study and secondary source material.

There are practical and organisational reasons for this sort of balancing form and function, but in Medieval literature aesthetics also played a very important role in attracting the readers and in targeting their attention to reach the outcome that is wanted (Witherden 2017, 79). These scribal decisions, ruling patterns, give the imagery the type of visual coherence where the text and image are structured on the page by these certain patterns in a way that the final product is not only easy to use but also aesthetically pleasing (Witherden 2017, 91). Witherden even suggests that the intricate, complex aesthetic of the Zodiac man partly adds a sense of authority and reassurance when used by e.g. a physician or a surgeon (Witherden 2017, 96). In these ruling patterns, there are general shapes planned for the text surrounding the image of the Zodiac man (“arrow”, “rectangle”, “cross”, or “body contour”) (Witherden 2017, 98).

Variation in these shapes is possible to some degree, but most manuscripts follow these patterns in arranging the text and visual elements (Witherden 2017, 98–99). Though the phenomenon of ruling patterns is fairly understudied as of yet, examining these relationships between text and image in Medieval literature gives us valuable information about the production, intended audience, and social functions of page design throughout history (Witherden 2017, 98).

A recent, 2023 article by Matti Peikola and Mari-Liisa Varila discusses the multimodal (and multilingual) practices in late medieval calendars, a topic which is fairly similar to this study (Peikola and Varila 2023, 93). I gained access to this text through a copy I received from the authors with their permission of use. They analyse both the compositional elements of calendars and features of individual calendar entries in ca. 1300–1550 English manuscripts (Peikola & Varila 2023, 111). Some of these calendars are found in almanacks and astro-medical compilations (Peikola & Varila 2023, 96). One level of analysis in this study is that of the page, as “the page provides a meaningful material space in which to observe multimodal practices of layout and composition” (ibid.). Inspired by this I looked into the possibility of utilising the page-level as a unit of analysis also in the style of Hiippala 2016 as well. For example, Hiippala (2016) studies how language and illustrations etc. work together in creating the page as a whole, however many of the images chosen for the present study contain images that are so large (for technical reasons: see section 3.3 for a more detailed explanation on woodcut illustrations) that the texts relating to them are scattered on the surrounding pages. As this approach turned out to be unapplicable it was discarded. Moving on, what Peikola and Varila found out was that the context of manuscripts determined a great deal of what was included in the calendar and how it was shaped (Peikola & Varila 2023, 111). This is something that I also want to look at in this present study: how does the context of the publication (e.g. medical, astrological) affect the contents (linguistic elements and visual cues) of the Zodiac man in addition to trying to see if there is any diachronic variation.

Moving forward from the page-level towards larger units of analysis, Carla Suhr’s 2011 dissertation describes the evolution of the Early Modern witchcraft pamphlets from the sixteenth and seventeenth century. Moreover, the study focuses on the notion that audience expectations can be looked at as something that can change and modify the genre itself (Suhr 2011, 3). The audience for these witchcraft pamphlets was very similar to that of the printed almanack: the printing press enabled the circulation of shorter texts to a more varied semi-

literate audience (Suhr 2011, 4). One of the ways in which Suhr analysed the pamphlets was assigning textual and topical (and secondary textual) labels to them. Textual label is a term that refers to the words in a text that carry certain topical, structural and discourse features: for example, textual labels such as a letter or news carry certain expectation in the reader's mind regarding the structure and contents (Suhr 2011, 132–133). Whereas textual labels are more focused on the genre of the text, topical labels refer to the exact topic of the text (*ibid.*). The topical label sort of specifies further the information provided by the textual label (Suhr 2011, 138). So for example in the context of the present study it would be possible to have directions on the same page as the illustration of the Zodiac man (textual label=directions, instructions), and the directions could then contain topical labels regarding the contents (e.g. medicine, husbandry). I intend to implement these ideas of labels to the materials of this thesis, but not as such. I will discuss this in more detail in chapter four.

Another study by Suhr (and Ratia, 2017) focuses on the verbal and visual communication in Early Modern English medical text title pages. The study aims to describe the visual features of said title pages and investigate diachronic developments as well (Ratia & Suhr 2017, 68). Again, the readership of the texts studied here is similar to the present study. Ratia and Suhr analyse the prominent visual features of the title pages (illustrations, borders, typefaces, highlighted words etc.) in addition to categorising the highlighted words under textual or topical labels or headlines (Ratia & Suhr 2017, 75–76). Besides diachronic development, the materials were also analysed for any emerging trends or patterns both in macro- and micro level. What they found out was that there was a very systematic way of highlighting certain words and the relations between these words change diachronically. Title pages are very different to what the present study is investigating (although some almanacks do have title pages) so the systems cannot be applied as they are: the title pages highlight the labels very prominently whereas when looking at the immediate contexts of the Zodiac man illustration only with close reading can you determine the textual and topical labels based on the contents of the said texts.

3 Almanacks in the Early Modern English period

This chapter introduces the history, the origins, the predecessors, and the contents of almanacks in Early Modern England: 3.1 discusses the Roman calendar which served as a precursor to the Early Modern almanack to give historical context and to draw comparisons, 3.2 introduces the typical contents of the Early Modern almanack and 3.3 talks about Early Modern printing processes to give background for the making of the printed almanacks, making of woodcut images, and compares the process to that of the Medieval manuscripts. 3.4 also discusses the Early Modern English features that are relevant in this study.

3.1 History of the English Almanacks and the Roman Calendar

The Medieval and Early Modern almanack was sort of a portable, foldable manuscript, sometimes attachable to the belt with a string (Witherden 2017, 81; Bober 1948, 24). The sheer number of surviving almanacks suggests that it was a necessary possession in many Medieval households (Mooney 1997, 11). Many people, not only physicians, but also merchants, farmers, and churchmen owned one: the popularity of the almanack and the wide range of its audience makes it an interesting subject for studying form and context (*ibid.*). Capp has estimated that in the earliest years there is detailed evidence from, the 1660s, the number of printed almanacks sales was around 400 000 copies, further suggesting that this number indicates that as many as one in three families bought one (Capp 2008, 23). There was even a royal ordinance in 1465 that required physicians, barbers, and surgeons to possess the current almanack or calendar (Bober 1948, 12). Besides these medical and more general subjects, almanacks were also astronomical guides for the coming year: by analysing celestial movements they offered astrological interpretations (Peck 2019).

The closest thing to a precursor was the Roman calendar which was later combined with the Saint's days, leap years and Easter by the early Christian Church, probably due to practical reasons as calendars were thought to be of secular nature (*ibid.*). Calendars reached the height of their popularity in the late fourteenth century, whereas printed almanacks gained popularity later, in the late fifteenth century, and the Zodiac men start to appear more prominently as woodcuts in the late sixteenth century printed almanacks (Mooney 1997; 12, 16–17). In the two-hundred-year timespan there was a shift from manuscript calendars, which were rendered in Latin, towards the almanacks that were written in the vernacular (Mooney 1997, 16). However, in some of these almanacks you could still find tables and canons written in Latin

(*ibid.*). This was due to perhaps copying tables and diagrams from manuscripts to almanacks: it could have been the printer's decision to leave the original terminology as is.

The Roman calendar system used kalends, nones, and ides instead of the modern method of accounting days of the month from 1 through 31 (Clemens & Graham 2007, 194; Mooney 1997, 11). Kalend is the first day of the month, none is either the fifth or the seventh day, and in the months that the nones are on the fifth days (January, February, April, June, August, September, November, December) the ides are on the thirteenth days, and in the months that the nones are on the seventh (March, May, July, October), the ides are on the fifteenth (Clemens & Graham 2007, 194). The days of the week or month were calculated with this pattern as well as in how many days are there from kalends to nones or vice versa (*ibid.*). The columns in Roman calendars also included Dominical letters (each year is assigned with a letter to indicate on which day of the week Sunday is) and golden numbers (each year is assigned with a number to indicate the dates of new moons) (Clemens & Graham 2007, 199–200). The Roman calendar was found in many a Medieval manuscript and service or liturgical book. Lunar information and calculations were important in e.g. books of hours (often a family heirloom to be passed on to mark a marriage: used as a means to participate in daily worshipping and prayer (Clemens & Graham 2007, 209)) to determine which events in Christ's life or which Saint's days were to be commemorated during which days during the solar year (Clemens & Graham 2007, 192–194; Mooney 1997, 11). For example, Easter was celebrated on the first Sunday after either the first full moon of the year or the first full moon after the spring equinox depending on whether you use a Gregorian or a Julian calendar (Packer (n.d.) has an entire chapter devoted to calculating the exact date for Easter, this is also a very good read regarding any moveable feasts or Dominical letters), so determining the date requires some calculations i.e. including calendars in service books was a necessity (Mooney 1997, 11; Schmitz-Esser 2015, 121).

Simultaneously with the Roman calendars there were still manuscript copies of prognostications circulating in England, and based on the contents it can be said that some of the texts were later on reused in printed almanacks (Mooney 1997, 12–13). These prognostications were made for the coming year, and they were e.g. based on the days of the week on which Christmas or New Year's Day fell, or on the weather on a certain Saint's day, and they were written in vernaculars (mostly in Latin or English), and in both prose and verse (*ibid.*). In some (rare cases) of these manuscripts prognostications occurred together with a calendar, and some were even foldable to pocket-size: these types of the older manuscripts

containing texts, tables, and illustrations could also be thought of as predecessors for the Early Modern almanack besides the Roman calendar, or at least a sort of a hybrid between the two (Mooney 1997, 13). Later manuscript calendar composers added scientific tables and texts including information about bloodletting, medicinal practice, and lunar eclipses among many other practical things (Mooney 1997, 14–15), so the contents were already starting resemble those of the Early Modern printed almanacks. The first almanacks were mostly in booklet form, though some of them are printed in broadsheet (still foldable nonetheless) (Mooney 1997, 18). Some were even printed only on one side of a heavy paper – this is probably the precursor to the modern wall calendar (*ibid.*). The next section discusses the contents of the Early Modern almanacks.

3.2 Typical contents of the Early Modern almanack

A typical Early Modern almanack consists of a foreword to the reader, a list of contents, calendar including information about eclipses and the Moon's lunar phases, treatises on medicine and stars, short list-like chronologies on the world's history (a Stuart specialty: Capp 2008, 211; see also Peck 2019 for a more in-depth analysis on these chronologies), information of upcoming fairs and events, electionaries with pictures of the Zodiac man or the Vein man, and lengthy prognostications. These prognostications could have contained political, social, and religious speculation: fate of the kings, impending social disasters like crimes or harvest failure (Capp 2008; 102–103, 271). Basically a prognostication was a combination of promises and threats to encourage virtue but also to sort of maintain the social hierarchy ordained by God (*ibid.*). The additional space given by the one-year span of the almanack made it possible to include things such as these in addition to the existing information compared to a manuscript's contents.

If you further compare the manuscript calendars and printed almanacks, you notice that the calendars in English manuscripts are often written in Latin instead of English: the remnants of this scholarly feature however can be found in almanacks as well as the text is mostly written in vernacular, but some of the older, copied texts or terminology in tables and figures are in Latin (Mooney 1997, 16). An interesting point of comparison is also the appearance of the “Vein Man” in some of the manuscripts, a naked male figure with veins drawn on his skin for instructions in bloodletting ailments: a very similar figure to the Zodiac man (*ibid.*). It did not gain such popularity as the Zodiac man probably because it is not as versatile and so more often the image of the Zodiac man is connected to bloodletting than the actual man of veins,

although he can be found in some almanacks. The manuscript calendars were also notably more expensive: because of their incredibly long life (sometimes calendars were made for the next 76 years: there were not 76 sets of calendar months but instead there was a set of tables with which you could e.g. calculate the dates for moveable feasts) they were made of vellum (Mooney 1997, 20). Because of the cheaper and quicker mass production process (using only one-year span made it possible to print on cheaper paper, not to mention the speed of reproduction of the printed almanack compared to a hand-written and illustrated manuscript), and the use of English instead of Latin, there was a shift from noble, clerical audience towards a more middle-class one (ibid.). So even though both manuscript calendars and almanacks had very similar contents in terms of collections of texts and tables, the almanack was simply cheaper and easier to use, and most importantly it was more accessible to a greater audience. The two-century transition period from script to print also meant shifting from lengthier prognostications to shorter treatises on medicine and stars (Mooney 1997, 21.) Moving on from more scientific explanations closer to everyday topics reflected the growing literacy levels among the less educated folk, as the contents were now easier to follow and interpret if you were literate (ibid.). Either way, this reflects the recognition of marketability and taking into account the audiences preferences (ibid.). Exploiting the possible market and circulating the almanacks also lifted astrology to a popular level among many because of the authority of the printed word (Capp 2008, 20). Next section, 3.3 introduces the methods with which both vellum and paper were made and the intricacies of the printing processes.

3.3 From Medieval book production towards early printing processes

This section discusses how the early printed almanacks were made, and especially how the woodcuts of Zodiac men were produced and how they came to life on paper. Parchment is an umbrella term for writing material made from intricately prepared animal skin that was very expensive and considered prestigious at the time: parchment made especially from calfskin or otherwise regarded to be of higher quality was called vellum (Clemens & Graham 2007, 9). The process of parchment-making is fairly time-consuming and consists of many steps: the skin must be washed properly beforehand and the dehaired with lime solutions and different tools, after which it is left to dry stretched over a special wooden frame to diminish shrinking of the skin (Clemens & Graham 2007, 10).

Compared to this, papermaking was a lot cheaper and more efficient. Paper was also more suitable for printing press as it would have taken a lot of animals to produce the amount of

parchment or vellum for an entire edition (Werner 2019, 26). Shortly: a clump of cellulose usually consisting of rags, old ship sails or scrap paper (sometimes left to ferment for a while) was beaten or macerated and mixed with water to make pulp, after which it was sieved with a special screen and what was left on the screen was then pressed to remove excess water and hung to dry (Clemens & Graham 2007, 6–9; Werner 2019, 27). Scribes were usually forced to use parchment in making manuscripts containing illustrations for practical reasons as the ink they used would bleed through anything thinner. In this sense, and also considering the fact that manuscripts had to last for sometimes even decades, paper was the less popular choice. Considering that the almanack had to only last for a year or so compared to manuscripts, it was possible to use the thinner and cheaper material in the printing process. Of course the sizes, quality, and prices of paper varied (e.g. Da Rold 2020; 58, 88), but I think it is safe to generalise as far as to say that most manuscripts were produced on parchment and later on when paper really started to circulate in England the scribes also shifted towards using that as a medium. But before that, scribes tended to use paper mostly for hastily copying foreign books (Da Rold 2020, 148). Compared to parchment and vellum, by choosing to use paper in book production instead, the same amount of money provides the scribe or printer a lot more surface to write on (Da Rold 2020, 87).

Then what made the printing process so much quicker and more efficient? Though the process still contained multiple intricate steps, it was nevertheless faster to produce products this way than scribing by hand: with different folding techniques you could print multiple pages simultaneously with the letterpress when the type was set (Werner 2019, 9–13). All printing starts with paper making (a process explained above), and it was customary to first dampen and then flatten the ready-made sheets in order for the ink to be absorbed properly (Werner 2019, 17). A person called compositor marks off where each page starts in the manuscript for the printer, so that they will know what size the pages should be and what size type can be used (Werner 2019, 10). Other typographical conventions that were useful knowledge to the printer were whether the text was in prose or verse, or should there be illustrations somewhere (ibid.).

The compositor then sets the type by setting letters, spaces, punctuation, and ligatures to something called galley (a tray from which the ready page would then be tied up with twines) with the help of a special composing stick where they would first gather entire lines of text before transferring them onto the said galley (Werner 2019, 10–15). The compositor would naturally then also be responsible for correct spelling and the choice of initial letters and

ornaments (Werner 2019, 15). The pages would then be transferred to an imposing stone where they would be put in correct order with something called a chase (an iron frame), the headlines would be set, and any remaining gaps would be filled out with wooden sticks (*ibid.*). The galley is then carried to the letterpress, which is a complex machine with multiple moving parts (for a more in-depth explanation on how the machine works, see: Werner 2019, 16–18) (Werner 2019, 16–17).

After printing both sides of the sheets, the pages are folded, gathered, and finally cut open (Werner 2019, 9). Comparing this to the much slower process of first producing parchment or vellum and then scribing by hand after pricking and ruling the pages, it is clear that this enabled the shift towards mass-production of printed books and pamphlets from handwritten manuscripts (although the influence of the printing press in the paper production process made paper more available to scribes as well, indicating a rise also in manuscript production (Werner 2019, 2)). Something to note is that composing and printing English almanacks was mainly done in the continental Europe before the sixteenth century, before letterpress machines were beginning to emerge in England (Griffin 2019, 123).

All this now leads us to the making of the woodcut images of the Zodiac men. Understanding the intricacies of the printing process helps with understanding the value of these images: producing a woodcut takes a lot of effort. Woodcuts are a type of relief printing, where you carve the white spaces out of a block of wood and the parts of the surface that stand in relief are the ones that get printed on the paper as a mirror image (Werner 2019, 65–66). This also means that if the image is traced and then copied from the already printed image, the new print will then be the mirror image of the one that it was traced from. The block can be printed simultaneously with the text of the page in the same press, and the same block can be used over and over again (Werner 2019, 66). Reusing woodcuts was also much faster compared to hand-drawing the illustrations in manuscripts: you could make borders and initial letters in woodcuts as well, and printers are known to have even loaned and sold their woodblocks for other productions (*ibid.*). Moving on from the technological side of the almanacks to the languages used in them, the next section introduces the common features of the Early Modern English and the process of vernacularisation.

3.4 Linguistic features of Early Modern English

Traditionally the English language is usually divided into three periods: Old English (before c. 1100), Middle English (c. 1100–1500) and Modern English (after c. 1500) (Nevalainen

2006, 1). Early Modern English resembles Modern- or Present-day English very much, but it is useful to distinguish it as a separate linguistic period of time (c. 1500–1700) as there are apparent differences in grammar, vocabulary, and spelling (*ibid.*). Middle English and Modern English are as variations so far away from each other that an additional period in between is sensible for the sake of continuum: in linguistic change there are no clear end dates to periods of time as change is often gradual (Nevalainen 2006, 1–3). What is also noteworthy is that some researchers consider the beginning of the Early Modern English period to begin after the Great Vowel shift: in short, this was a series of changes in sound qualities affecting the pronunciation of Middle English long vowels (e.g. from /bo:t/ to /bu:t/) (Nevalainen 2006, 7). This period was also the dawn of standardisation in the English language: texts were no longer localisable due to the emergence of spelling standards, and the beginning of the codification of the said standardisation is often regarded as the end of the Early Modern period and the beginning of the Modern (Nevalainen 2006; 8,13). Among these reasons this period of linguistic change should be regarded as a distinct system rather than as a subsystem of present-day English (Görlach 1991, 2).

The increasing amount of people reading in English as a vernacular meant that there was also a growing need to expand and enrich the language, and one way to accomplish this was by borrowing and copying words of e.g. Latin, French, and Greek origin (Nevalainen 2006, 50). The mass production of printed works on cheap paper and growing interest in for example religious texts and entertainment in the vernacular increased private reading and eventually even the levels of literacy (Görlach 1991, 5–7). Though this is something that has been done continuously throughout the history of the English language, it has mostly been done by the gentry as French was regarded as the language of law and documents, and Latin the language of education and sophistication. Now that the use of the English vernacular extended to literary, the frequencies of influences grew significantly in the Early Modern English period (Görlach 1991, 155–169).

On the other hand, vernacularisation meant that the use of other languages than English became less popular in printed publications. And when the printing press came to England in the late fifteenth century (Nevalainen 2006, 30), it was easier and more efficient to mass-produce more standardised versions of texts in the English language than before. While looking at the second aim of this study, trying to look for possible changes in the contents and language throughout the sixteenth century, this is what I keep in mind: I am hypothesising that towards the end of the sixteenth century there will be more vernacular on the page and

less remnants of manuscripts and their languages (Latin, French) disregarding important terminology.

The term ‘borrowing’ itself is a larger phenomenon, a process of one language simply copying a linguistic component from another (either the form or the meaning, entirely or partially) (Durkin 2014, 3). The term comprises borrowing, donors, recipients, and loans (ibid.). When both the form and the meaning of a certain word are replicated in another language, the new word in the recipient language is called a ‘loanword’. This is different from semantic borrowing, in which an existing word either gets a new meaning or a word is created from already existing elements in the borrowing language (Durkin 2014, 162). As the turning point of Middle English towards Early Modern English is also the beginning of standardisation, I reckon that towards the end of the sixteenth century there will be not necessarily fewer loanwords, but perhaps less uncertainty regarding the spelling as it becomes more regular. In other words: less cases of the same word appearing in the same text but spelled differently: for example the English word Capricorn can be found in the materials of this study spelled with various different endings, sometimes inside the same piece of text. In the present study, I will be trying to identify loanwords in the immediate contexts of the Zodiac man illustration with the help of the Oxford English Dictionary (OED) and analyse the findings in order to achieve a comprehensive overview on the process of vernacularisation and diachronic change in language use regarding the texts associated with the Zodiac man illustrations. This will be further discussed in the next chapter.

4 Materials and methods

In this chapter I will first introduce EEBO in section 4.1, EEBO being the online database where the materials are from. This section also introduces how I collected the materials and introduces the Luborsky and Ingram 1998 book which inspired this study and also on basis of which I built my classifications: in 4.2 I explain the methods that the materials were narrowed down and with which they were analysed. 4.3 introduces a tool for photo managing called Tropy, and explains how I selected and organised the materials with the help of this program.

4.1 Early English Books Online (EEBO)

Early English Books Online (EEBO) is a database where many of the works printed in the British Isles and North America are available from 1470–1700 in page images. These works also include works printed elsewhere in English. Most of the material is scanned from microfilm in pdf format. All the images are in black and white, which proposes some issues with intelligibility regarding red ink used in the original works: some of it turns invisible in scanning. Also some of the files can be broken at times meaning there is no online access to them at that specific moment.

A book by Luborsky and Ingram (1998), *A guide to English Illustrated books, 1536–1603*, not only discusses woodcut art in English publications, but it also introduces different types of Zodiac man woodcuts with lots of examples in the appendices. My strategy in searching for suitable imagery was using this book and listing all of the STC numbers found in the appendix on an excel sheet. These specific images containing the Zodiac man can be quite difficult to find, but based on these numbers you can find the sources of the images used in the book quite easily. STC is a numbering system used for cataloguing purposes. It stands for Pollard and Redgrave's Short-title Catalogue of Books Printed in England, Scotland, & Ireland, and of English Books Printed Abroad, 1475–1640. Typing the STC numbers in the "Bibliographic name/number" field in Advanced Search on EEBO yields in the specific almanacks which the images used in the Luborsky and Ingram 1998 book are from. This is a feasible and lucrative way to find almanacks including images of the Zodiac man compared to searching with key words only as there are quite a few English almanacks available on EEBO to go through.

Due to some of the materials used not being on EEBO as the STC number yields no search results, some of them being from books instead of almanacks, and the previously mentioned

issues on the scanning and/or photocopying processes, some of the works were left out of this study (Appendix 1). Besides these aforementioned criteria (must be an almanack, must be available on EEBO, must be in a readable condition) I classified the almanacks based on whether there was an image of the Zodiac man available in the edition that was uploaded to EEBO. One of the almanacks was mentioned twice in the text (the same STC number) so I included only the second edition that was available on EEBO. So: all of the works mentioned in the Luborsky and Ingram 1998 book are tabulated in Appendix 1, except for the ones that turned out to be books and the one that was mentioned twice. The contents of the table are organized based on the year of publication. The table also includes the STC numbers, names of the publishers, and information on whether the piece is available on EEBO, if it is readable, and whether or not the version of the almanack uploaded on EEBO contains the image of the Zodiac man. Out of 96 almanacks 80 were available on EEBO, out of which 56 were in readable condition. 48 of these contain the type of the image of the Zodiac man that I wanted to further investigate, and these images are the ones I chose to analyse more closely. The images were named in my dataset by the STC number that they can be found with (e.g. 501.2), and should one object consist of two or more pages, they are also given letters of alphabets at this stage (e.g. 433a, 433b).

4.2 Methods

I based my classification methods on Luborsky and Ingram (1998). The authors have applied descriptions from a 1948 article written by Harry Bober to organise the types of images determined by the visual elements included in the image of the zodiac man (Zodiac Man Type A, Zodiac Man Type B, Zodiac Man Type C, Zodiac Man Type D: Planet-Man, Zodiac Man Type E: Vein Man and Zodiac Man Type F). Bober himself made a more superficial division of the images based on previous research (dividing the images into for example the Microcosmic man, the Zodiac man, the Skeletal man, the Anatomical man etc.) but based on his ideas Luborsky and Ingram have created a more specific classification system with subtypes and detailed descriptions of the visual qualities. The visual categories included in this study are Zodiac Man Type A, Zodiac Man Type B, and Zodiac Man Type D: Planet Man. In the Luborsky and Ingram book you can find that the types are also divided into several different subtypes based on the physical arrangement of the zodiacal figures in the images. I will only introduce the subtypes that occur in my set of materials in the next few paragraphs.

I decided to keep the Zodiac Man Type D: Planet-Man in this study, as the content of these images is fairly similar only containing some additional astrological information and some names of planets and stars compared to that of the Zodiac men in types A and B. However, Type E: Vein Man is a very different image with a different historical background regarding its use. There were only six almanacks containing a Vein man in the Luborsky and Ingram book altogether so those are mentioned in Appendix 1, but ultimately they are not a part of this study. I decided to classify the available ones under not having an image of the Zodiac man due to the said differences in the style of illustrations. Zodiac Man Type F (Mannered style) only appears in one example in the Luborsky and Ingram book and this particular almanack is not available on EEBO, so Type F was also left out. My dataset does not contain any type C images either as there were no suitable ones in this set of almanacks. In types A and B, which are analysed in this study, the zodiac signs are arranged clockwise from the top. However, with the D type (also included in this study), the order of the zodiac signs begins from upper left as the layout of the image is a bit different compared to the others (including planetary information for example). Examples of these three styles of images (Types A, B, and D) of Zodiac men can be found in the Appendices (Appendix 3, Appendix 4, and Appendix 5). Next I will be discussing the order of appearance of zodiac signs in the Zodiac man illustrations: the information is also gathered in Table 1 below.

In Luborsky and Ingram 1998 Type A, the zodiac signs are arranged around the man clockwise as follows: Aries, Gemini, Leo, Libra, Sagittarius, Aquarius, Pisces, Capricorn, Scorpio, Virgo, Cancer, Taurus. In Type B, the signs are organised clockwise as follows: Aries, Taurus, Cancer, Virgo, Scorpio, Capricorn, Pisces, Aquarius, Sagittarius, Libra, Leo, Gemini. Type D (Planet-Man) combines planetary and zodiacal correlations, the planets being on the right side of the cut. Zodiac signs and planets are arranged clockwise from upper left as such: Gemini, Taurus, Aries, star (Saturn), star (Jupiter), star (Mars), sunface (Sun), star (Venus), star (Mercury), moonface (Moon), Aquarius, Capricorn, Sagittarius, Scorpio, Libra, Virgo, Leo, Cancer.

Table 1 The organisation of the zodiacal signs in the figures

Types of figures	Order of the Zodiac signs
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Zodiac Man Type A	Clockwise: Aries, Gemini, Leo, Libra, Sagittarius, Aquarius, Pisces, Capricorn, Scorpio, Virgo, Cancer, Taurus
Zodiac Man Type B	Clockwise: Aries, Taurus, Cancer, Virgo, Scorpio, Capricorn, Pisces, Aquarius, Sagittarius, Libra, Leo, Gemini
Zodiac Man Type C	Clockwise: Aries, Taurus, Gemini, Cancer, Leo, Aquarius, Pisces, Virgo, Capricorn, Sagittarius, Cancer, Libra
Zodiac Man Type D: Planet- Man	Combination of planetary and zodiacal correlations, planets on the right side of the figure. Clockwise from the upper left: Gemini, Taurus, Aries, Saturn, Jupiter, Mars, Sun, Venus, Mercury, Moon, Aquarius, Capricorn, Sagittarius, Scorpio, Libra, Virgo, Leo, Cancer
Zodiac Man Type E: Vein Man	No zodiacal figures or signs
Zodiac Man Type F	Figures are imposed on the man's body on the pertinent body parts

Moving on from the main types to the subtypes, next I will introduce the main features of the Luborsky and Ingram 1998 Zodiac Man subtypes. This information is also gathered in Table 2 below. Subtypes for the Luborsky and Ingram 1998 Zodiac Man Type A include types #1, #1a, #2, #2 State 2, #3, #4, and #5. In type A subtype #1 you can find a single border surrounding the image, the Ram is facing right, the Zodiac man is facing right, he has his hands out and he is standing on one fish. There are no names for the figures nor zodiacal symbols. There are lines connecting the zodiacal figures to the man's body parts. In Type A

subtype #1a you can find the Ram facing left, he is standing on two fish, and some of the other zodiacal figures are presented with slight differences compared to #1. In Type A subtype #2 the image has double border and both the Zodiac man, and the Ram are facing left. He is standing one foot on a fish and again there are no names for the figures or zodiacal symbols. There are lines connecting the zodiacal figures to the man's body parts. Type A subtype #2 State 2 is the same as #2 but with a single border. Type A subtype #3 has a single border, both the Zodiac man and the Ram are facing right, lines connect the zodiacal figures to the man's body parts, there is some additional terminology in the image, including the Latin names of the zodiacal figures. There is also landscape in the image. In Type A subtype #4 the Ram is facing left; the Zodiac man has his head thrown slightly back this time with many fish at the bottom. No names are given to the zodiacal figures and there are no zodiacal symbols. In Type A subtype #5 there is no border, the Ram is facing left, the Zodiac man's face is also slightly tilted to the left, he is standing behind the fish. No names are given to the zodiacal figures nor are there zodiacal symbols.

Subtypes for the Luborsky and Ingram 1998 Zodiac Man Type B include types #1, #2, and #3. In type B subtype #1 there is a double border, the Ram is facing right whereas the Zodiac man is facing left, he has each foot on one fish, lines ending with arrowheads connect the man's body parts to the zodiacal figures. There are zodiacal symbols on the outer edge but no names of the zodiacal figures. In type B subtype #2 the Ram is facing left, the Zodiac man is facing right, lines ending with arrowheads connect the man's body parts to the zodiacal figures, the zodiacal figures are identified and there are zodiacal symbols inside of the zodiacal figures. In type B subtype #3 the Ram is facing right; the Zodiac man is facing left and he is standing on one fish with the other fish behind. There are lines ending with arrowheads connect the man's body parts to the zodiacal figures. There are no names of the zodiacal figures nor the zodiacal symbols visible.

Subtypes for the Luborsky and Ingram 1998 Zodiac Man Type D: Planet-Man include types #1a, #1b, #1c, #1d, and #2. In type D subtype #1a there is a single border, the Zodiac man in facing left and he is standing each foot on one fish, and there are medallions with double borders surrounding the other elements of the image. The planetary symbols are on the right of the planetary signs and the moon is a crescent. There are the names of the zodiacal figures in Latin and zodiacal symbols. In type D subtype #1b there is a single border, the Zodiac man in facing left and he is standing each foot on one fish, and there are medallions with double borders surrounding the other elements of the image. The planetary symbols are on the right

of the planetary signs and the moon is a semicircle. There are the names of the zodiacal figures in Latin and zodiacal symbols. In type D subtype #1c there is a single border, the Zodiac man in facing left and he is standing each foot on one fish, and there are medallions with double borders surrounding the other elements of the image. The planetary symbols are on the left of the planetary signs with one exception (Saturn). The moon is a crescent. There are the names of the zodiacal figures in Latin and zodiacal symbols. In type D subtype #1d there is a single border, the Zodiac man in facing left and he is standing each foot on one fish, and there are medallions with double borders surrounding the other elements of the image. The planetary symbols are on the left of the planetary signs and the moon is a crescent. There are the names of the zodiacal figures in Latin and zodiacal symbols. In type D subtype #2 there is a single border, and there are medallions with single borders surrounding the other elements of the image. There are banners with the names of the Zodiacal figures connecting these figures with the man's body parts. There are no zodiacal symbols.

Table 2 Features of the Zodiac man figure's subtypes

Subtypes of figures	Type of border	The way the zodiac man is facing	Names of the zodiacal figures	Zodiacal or planetary symbols
Zodiac Man Type A #1	Single	His right		
Zodiac Man Type A #1a	Single	His right		
Zodiac Man Type A #2	Double	His left		
Zodiac Man Type A #2 State 2	Single	His left		
Zodiac Man Type A #3	Single	His right (partially)	x	
Zodiac Man Type A #4	Single	Head is tilted back		

Zodiac Man Type A #5	None	His left (partially)		
Zodiac Man Type B #1	Double	His left (partially)		x
Zodiac Man Type B #2	Double	His right (partially)	x	x
Zodiac Man Type B #3	Double	His left		x
Zodiac Man Type D: Planet-Man #1a	Single	His left	x	x
Zodiac Man Type D: Planet-Man #1b	Double	His left	x	x
Zodiac Man Type D: Planet-Man #1c	Double	His left	x	x
Zodiac Man Type D: Planet-Man #1d	Double	His left	x	x
Zodiac Man Type D: Planet-Man #2	Single	Forward	x	

To put it simply: the main visual types are to do with the order in which the zodiac signs are displayed in the illustration, and the subtypes are classified based on which way the figure is facing, the border types surrounding the image and whether there is zodiacal information or zodiacal signs, or the names of the zodiac figures displayed. Building on top of these Luborsky and Ingram 1998 visual types with connecting Suhr's (2011) labelling system and the vernacularisation as a process, I will implement additional linguistic and contextual categories for the almanacks relating to the language and the contents which I will then apply to all of the 48 pages containing images of the Zodiac man and the next few pages as well should they contain text that is clearly linked to the image. Hence why Hiippala 2016 turned out to be not applicable to the present study: I thought about the idea of analysing the

materials on a page level (a single page as a unit of analysis) but many of the images chosen for this study contain text relating to the images on the next page or two as well. In the book Hiippala for example examines how the page works together with language and illustrations in creating and understanding the product as a whole, but he does conduct this on the page level (Hiippala 2016; 10, 13).

The categories of analysis are (1) languages and linguistic elements, (2) visual elements, and (3) contents, but the actual classifying will be done by giving the text on the page textual and topical labels (e.g. Suhr 2011, Ratia & Suhr 2017) and listing all the additional languages besides English as the vernacular, as the visual classification is already done by Luborsky and Ingram in 1998. I will however discuss the applicability of these visual categories and how they seem to work. For the contents, as stated earlier, Suhr divides the labels into (highlighted) textual, secondary textual, and topical. I modified this idea as it can be sometimes difficult to make clear distinctions between all of these: I will not directly follow Suhr's division but divide the labels only into textual (words descriptive of the topic that place certain expectations on the contents; Suhr 2011, 133) and topical (word that further specifies the information provided by the textual label; Suhr 2011, 138). Some of the labels I classified as topical labels Suhr might classify as secondary textual labels as the borders between textual and topical labels can be vague (e.g. Ratia and Suhr 2017, 72). For example, in Ratia and Suhr 2017 study "phlebotomy" is categorized as a textual label, but in the present study it is labelled as a topical label. In a way, you could say that in the present study the term 'textual label' is used interchangeably or in lieu of the term 'text type' and both 'textual label' and 'topical label' are grouped together under 'topical label'. In addition to examining the terminology in the almanacks in different languages, I will also be identifying loanwords with the help of OED and analyse the findings in the following chapter.

I came up with all of the labels I used myself by closely reading and analysing the materials. The languages and linguistic elements will be analysed by discussing the language choices and the use of loanwords (however I will only include loanwords that are of astrological or zodiacal nature for the sake of the cope of this thesis). The results will be discussed in chapter 5. I will also look at the development of these features throughout the sixteenth century: is there anything notable happening in the linguistic and visual contexts in the span of approximately hundred years and if so, what kinds of shifts are there to be noted. As there are two aims to this thesis, firstly to detect patterns in the contents and language of the direct vicinity of the Zodiac man illustration in the Early Modern printed almanacks of the sixteenth

century, and secondly to look at the development and possible changes in the contents and language throughout the sixteenth century, classifying the materials in this study visually, language-wise, and content-wise should give a holistic view on the evolution of the Zodiac man woodcut image in the Early Modern printed almanack during this period.

4.3 Using Tropy to manage research materials

Tropy is a free, downloadable software for organising and analysing research materials. According to their website, “Tropy is an independent, open-source project designed and produced by an international team of historians and software developers” (Tropy n.d.). You can import a set of photos into Tropy, where you can combine photos into items or lists. With Tropy you can also add valuable metadata into the imagery, such as title, date, publishing year, publishing place and collection.

First I uploaded the readable 48 files chosen on the basis of Appendix 1 containing a suitable image of the Zodiac man from my resources to the software, where I was able to look at them more closely. I merged the items that consisted of multiple images into groups so that it would be feasible to find all of the images referring to a certain STC number quickly (e.g. under item named ‘520’ you can find both images 520a and 520b). Then I proceeded to tag the images by the already known criteria: the year of publication, and the Luborsky and Ingram visual types (and their subtypes). This way I was able to observe under different tags whether there are many images of the same visual type or if there are multiple publications from a certain year, as they are already named by their STC numbers. I tagged all of the images with the textual and topical labels that I associated them with, and added tags for any additional languages I found besides the English as vernacular and Latin as some of the terminology comes from e.g. French and Italian. I also tabulated all of this information on a separate excel sheet as well with which I formulated smaller, more comprehensible, and informative tables for this and the next chapter. The table as a whole can be found in the appendices (Appendix 2). In addition to this, I looked at the image files and identified loanwords of astrological or zodiacal nature with the help of OED and tagged these in the files as well for further analytical purposes. These are not included in Appendix 2, but will be discussed in the next chapter.

5 Analysing the materials

This chapter discusses the results of this study. 5.1 considers the languages and linguistic choices made in the surrounding text of the Zodiac man illustrations in Early Modern printed almanacks. 5.2 examines the accuracy of the Luborsky & Ingram 1998 visual types and subtypes, and also discusses the frequencies and distribution of the different types. Section 5.3 focuses on the contents of the almanack: the section introduces the textual and topical labels that were given to each almanack and analyses the contents with the help of these. These sections also include discussion of the frequencies and distribution of the said elements. Lastly I will discuss the limitations and possible future research suggestions in 5.4.

5.1 Languages and linguistic elements

This section discusses the language choices and their origins in both the Zodiacal terminology and other astrological choices of words which can be found from this set of Early Modern printed almanacks from the sixteenth century, in the immediate proximity of the Zodiac man illustration.

5.1.1 Zodiacal terminology

I examined both the languages used in the naming of the zodiac signs and other astrological vocabulary and the languages of its origin in the texts that are the closest or the paratext of the woodcut Zodiac man illustration. As discussed before, the page-level analysis was discarded as a method and instead (depending on whether the texts related to the Zodiac man illustration) the adjacent one to three pages were chosen as a unit of analysis. The languages used in the names of the signs and their frequencies can be found in Table 3. The number of calendars that use a specific language are counted in the frequency column instead of counting each individual term separately.

Table 3 Languages of origin in the Zodiacal terminology based on the word endings

Languages used in describing the zodiac signs	Frequency
Zodiacal signs in Latin	47
Zodiacal signs in French	12
Zodiacal signs in English (vernacular)	10
Zodiacal signs in Italian	2

I concluded the languages based on the declensions (especially the endings) of the terms: for example, ‘capricornus’ ends in the Latin declension ‘-us’, whereas ‘capricorne’ is of French origin (*OED*, s.v. “capricorn,” n.). The term ‘goate’ would then obviously be the vernacular Middle English version of the term, though it is of Germanic origin (‘goate’ is a rarer hybrid form of an Old English feminine consonant stem and an OE genitive singular form; *OED*, s.v. “goat,” n.). ‘Sagittario’ and ‘leone’ have Italian origins, however Italian endings were found on only two of the almanacks (*OED*, s.v. “sagittarius,” n.; *OED*, s.v. “leo,” n.). Had I focused solely on the etymological origins of the words, the results would be less interesting as most of this terminology is originally derived from Latin. I had more interest in the contact languages where the terms were later on borrowed from to English, which comes out in the word endings.

An interesting fact was that there was a bit more French endings than English ones in the materials, especially in the late 1560s and early 1570s. This could be due to the high status of the French language in the Medieval England, which was not easily deteriorated even by the vernacularisation process that begun in the Early Modern era, or it could simply be explained by the fact that many of these texts were copied from manuscripts or books that were produced earlier, so the terminology used was a product of its time. Another thing to be noted is that out of the 47 almanacks (one of the 48 almanacks in the materials contained no zodiacal terminology, hence the number 47) 19 contained the names of the Zodiac signs in multiple languages (or rather multiple origins of word endings). This highlights the number of contact languages that English as the vernacular had in the Early Modern period: there was this certain undecidedness on which terms to use before they were standardised.

5.1.2 Other astrological terminology

I searched the parts in the almanacks that are in close proximity of the Zodiac man illustration (i.e. somehow related to the image language-wise) for astrological and zodiacal loans, and with the help of the *OED* I was able to determine the donor languages of the borrowings. I covered all astrological terminology found as they were surprisingly so scarce there was no need to limit the search process in any way. The gathered information was organised into Table 4 which can be found below.

Table 4 Astrological and zodiacal loanwords and their languages of origin

F = Frequency

Word	Language/s of origin	Date of first attestation	F
signe, sign, sygne	French, Latin (<i>OED</i> , s.v. "sign," n.)	c1225 (<i>OED</i> , s.v. "sign," n.)	43
Moone, Moon, Mone (Luna)	Germanic (Latin) (<i>OED</i> , s.v. "moon," n.1)	c1275 (<i>OED</i> , s.v. "moon," n.1)	37 (2)
gouverne, gouvern	French (<i>OED</i> , s.v. "govern," n.)	c1300 (<i>OED</i> , s.v. "govern," n.)	22
celestiall	via Old French from Latin (<i>OED</i> , s.v. "celestial," adj. and n.)	c1384 (<i>OED</i> , s.v. "celestial," adj. and n.)	19
Sunne, Sonne (Sol)	Germanic (Latin) (<i>OED</i> , s.v. "sun," n.) ¹	c1175 (<i>OED</i> , s.v. "sun," n.1)	18 (2)
rule	French (<i>OED</i> , s.v. "rule," n.1)	a1225 (<i>OED</i> , s.v. "rule," n.1)	18
planet, planettes	French, Latin (<i>OED</i> , s.v. "planet," n.)	c1300 (<i>OED</i> , s.v. "planet," n.)	14
almanack, almanacke	French, Latin (<i>OED</i> , s.v. "almanac," n.)	c1392 (<i>OED</i> , s.v. "almanac," n.)	14
zodiake, zodiacke, zodiaque, zodyacke	via Old French from Latin, Greek, Italian, Spanish, Portuguese (<i>OED</i> , s.v. "zodiac," n.)	1390 (<i>OED</i> , s.v. "zodiac," n.)	11
dominion	via Old French from Latin (<i>OED</i> , s.v. "dominion," n.)	c1430 (<i>OED</i> , s.v. "dominion," n.)	11

astronomicall	Latin (<i>OED</i> , s.v. "astronomical," adj. and n.)	1551 (<i>OED</i> , s.v. "astronomical," adj. and n.)	10
eclypsis, eclipse	French (<i>OED</i> , s.v. "eclipse," n.)	c1374 (<i>OED</i> , s.v. "eclipse," n.)	7
orientall	French (<i>OED</i> , s.v. "oriental," adj. and n.)	c1400 (<i>OED</i> , s.v. "oriental," adj. and n.)	3
occidentale	via Old French from Latin (<i>OED</i> , s.v. "occidental," adj. and n.)	c1400 (<i>OED</i> , s.v. "occidental," adj. and n.)	3
triplicitie	Latin (<i>OED</i> , s.v. "triplicity," n.)	1398 (<i>OED</i> , s.v. "triplicity," n.)	3
meridionale, meridian	French (<i>OED</i> , s.v. "meridian," n.)	c1386 (<i>OED</i> , s.v. "meridian," n.)	2
electuarie	Latin (<i>OED</i> , s.v. "electuary," n.)	1398 (<i>OED</i> , s.v. "electuary," n.)	2
ascendent, ascension	via Old French from Latin (<i>OED</i> , s.v. "ascendant," adj. and n.)	c1386 (<i>OED</i> , s.v. "sign," adj. and n.)	2
septentrionale	French, Latin (<i>OED</i> , s.v. "septentrional," adj. and n.)	c1392 (<i>OED</i> , s.v. "septentrional," n.)	1
horoscope	via Latin from Greek (<i>OED</i> , s.v. "horoscope," n.)	c1050 (<i>OED</i> , s.v. "horoscope," n.)	1
eleccion	French (<i>OED</i> , s.v. "election," n.)	c1270 (<i>OED</i> , s.v. "election," n.)	1
raigne	French (<i>OED</i> , s.v. "reign," n.)	a1300 (<i>OED</i> , s.v. "reign," n.)	1

prognostication	French, Latin (<i>OED</i> , s.v. "prognostication," n.)	a1400 (<i>OED</i> , s.v. "prognostication," n.)	1
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Different spellings of the same word are in the same cell. ‘Luna’ and ‘Sol’ are technically different words than ‘Moon’ or ‘Sun’, but as they serve the purpose they are included in the same cells in parentheses. Like with the zodiacal terminology, there was some hesitation with the wordings: again there was either multiple spellings of the same word or the same word in multiple different languages. Not surprisingly, the most frequent loanwords used were to do with the celestial signs governing or ruling, and the Sun’s and the Moon’s positioning reflecting on the contents that are mostly related to astrological and anatomical phenomena. These words are also distributed quite evenly over the sixteenth century, whereas the rarer terms, such as the names of compass points are only rare occurrences. The number of loanwords found and used was predicted to be less frequent towards the end of the century. There is a slight decrease in the numbers detectable in the last decade, 1590s, but these numbers are in no way significant enough to determine whether the vernacularisation process taking place affected these results or if it is just plain coincidence.

The origin of the following words is not entirely clear: sign, planet, almanack, septentrional, and prognostication. The *OED* states that these words have multiple origins, meaning that for example the word ‘sign’ (n.) is partly borrowed from French and partly from Latin. The English language was highly receptive to contact languages (esp. Latin and French) due to continuing frequent exposure to them (Durkin 2014, 225). What was also influential was the fact that reading basically anything required at least some level of competence in either French or Latin, and this extended period of trilingualism in England could have affected the fact that it is not always apparent from which language the vocabulary originated from (Durkin 2014, 229). Besides determining the etymological origins of these words, dating them can also be problematic to an extent. I have here in Table 4 presented the dates of the first attestations of the words according to *OED*, but because words can be dated either with information about the date of the earliest witnessing of a manuscript which the word is included in, or by trying to presume the date of when the text was originally compiled, it is not always clear when the word was first used (Durkin 2014, 228). It is good to keep in mind the complexities of manuscript transmission and the issues that lie within, and the fact that there can also be quite remarkable gaps and contradictions in older English texts (*ibid.*).

5.2 Visual elements

This section discusses the accuracy and the applicability of the Luborsky & Ingram 1998 types in 5.2.1 and subtypes in 5.2.2. The sections also discuss the frequencies and distribution of the types and the subtypes throughout the sixteenth century.

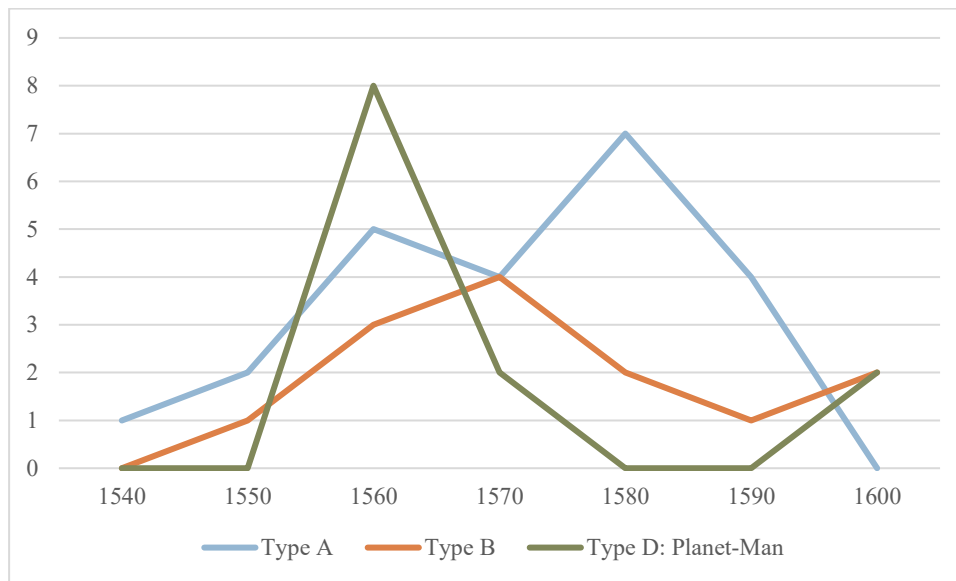
5.2.1 Luborsky & Ingram 1998 visual types

It became clear that there were no issues with the Luborsky & Ingram visual classification methods as I analysed the materials. Out of all of the three visual types included in this study, the Zodiac Man Type A was clearly the most frequent throughout the whole century. The difference in frequencies between the Zodiac Man Type B and the Zodiac Man Type D: Planet-Man is almost non-existent. These frequencies are depicted in Table 5 and Graph 1.

Table 5 Frequencies of the Luborsky & Ingram 1998 visual types

Luborsky & Ingram 1998 visual type	Frequency
Zodiac Man Type A	23
Zodiac Man Type B	13
Zodiac Man Type D: Planet-Man	12

Type A reached the peak of its popularity in the 1580s whereas Type D: Planet-Man was the most used visual type of illustrating the Zodiac man in the 1560s. The frequency relationships become more even in the 1590s as the amount of the materials to analyse decreases drastically by the beginning of the seventeenth century. Whereas with the visual types there are noticeable peaks in the frequencies, the distribution of the subtypes seems a lot more even, even though obviously the Type A subtypes clearly rule the tables. I cannot say that specific printers or publishers used only certain Zodiac man types, but some of them had clear preferences: I analysed the types used from the six largest publishers from the materials, and found out that E. White preferred Type D: Planet-Man -style, and that R. Watkins and N. Hill preferred Type A -style illustrations. A comprehensive list of the publishers and their works can be found in Appendix 1.

Graph 1 Frequencies of the Luborsky & Ingram 1998 visual types

5.2.2 Luborsky & Ingram 1998 visual subtypes

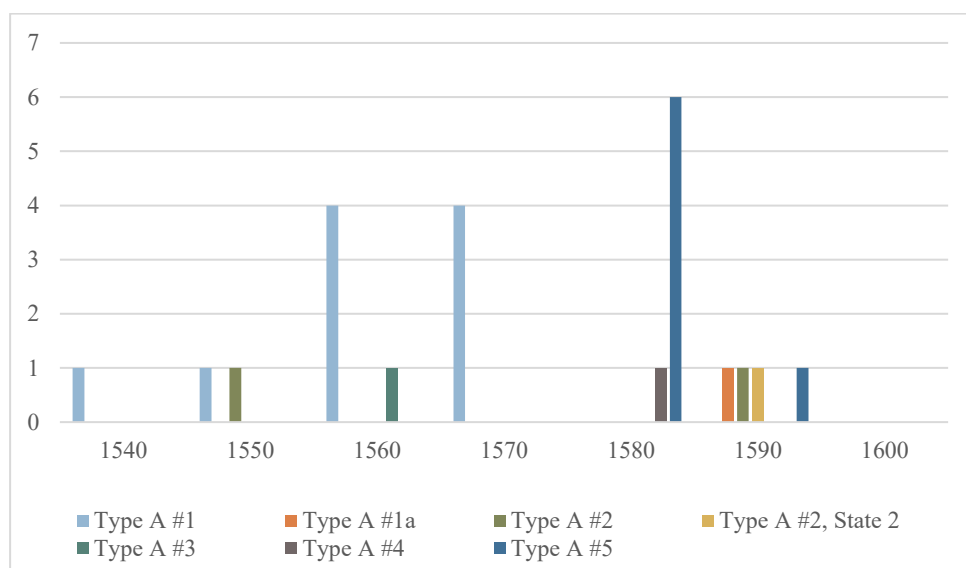
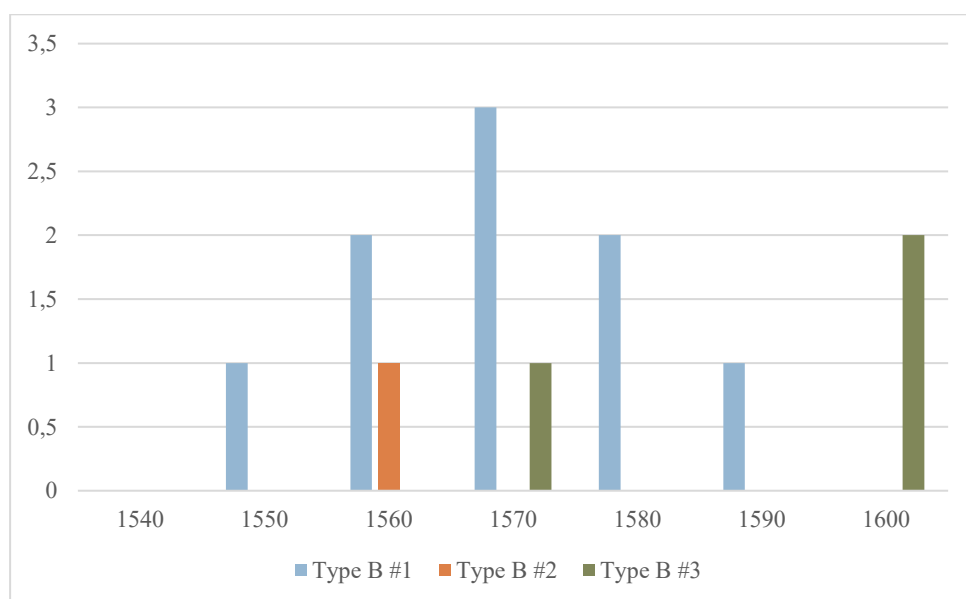
As with the visual types, no major issues or questions arose when analysing the classification systems of the visual subtypes. As stated above, the distribution of the subtypes is more even, even though three subtypes rise as the most frequent of the century: Zodiac Man Type A subtypes #1 and #5, and Zodiac Man Type B subtype #1. These frequencies are presented in Table 6, Graph 2, Graph 3, and Graph 4 below. Type A #1 was the most popular style of Zodiac man illustrations during the 1560s and 1570s (number of instances during both decades being four). Type A #5 gained popularity in the mid-1570s with six numbers of instanced and kept its position as the most used illustrational style up until the 1590s. The Type B #1 was not as clearly the most popular option when you look at the distribution of the subtypes, but it was quite evenly used throughout the century with as much as three numbers of instances in the 1570s.

Table 6 Frequencies of the Luborsky & Ingram 1998 visual subtypes

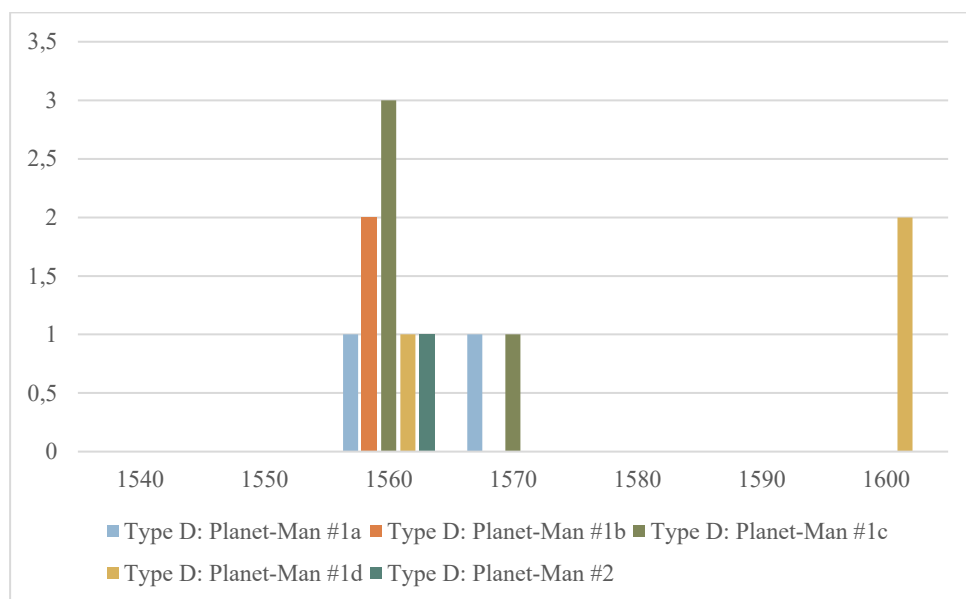
Luborsky & Ingram 1998 visual subtypes	Frequency
Zodiac Man Type A #1	10
Zodiac Man Type B #1	9
Zodiac Man Type A #5	7
Zodiac Man Type D: Planet-Man #1c	4
Zodiac Man Type B #3	3

Zodiac Man Type D: Planet-Man #1d	3
Zodiac Man Type A #2	2
Zodiac Man Type D: Planet-Man #1a	2
Zodiac Man Type D: Planet-Man #1b	2
Zodiac Man Type A #1a	1
Zodiac Man Type A #2, State 2	1
Zodiac Man Type A #3	1
Zodiac Man Type A #4	1
Zodiac Man Type B #2	1
Zodiac Man Type D: Planet-Man #2	1

A minor thing worth noting regarding the issue with one almanack being mentioned in the Luborsky and Ingram 1998 book twice is that the edition that was available on EEBO is Zodiac Man Type B subtype #3 (which is the one that was included in this study out of the two). In the book, the almanack with the STC number 525.5 is also listed under Zodiac Man Type A subtype #5. It seems that even though both editions seem to be published by R. Watkins (assignee of J. Roberts) in the year 1600, the printers have used different images in the publications. There are multiple possible explanations for the difference: the almanacks could have been printed in different locations or by different printers, or one or the other could be a now lost test print or an entire missing edition (or simply a mistake in the Luborsky & Ingram 1998 book). The Type B #3 is printed in London, England but the printing location of the Type A #5 is unknown to me as it is not available on the database. As with the main types, it cannot be said that specific printers only used certain subtypes. Here again I analysed the six largest publishers from the set of materials, and I found that N. Hill preferred Type A subtype #1, T. Marsh preferred Type D subtype #1c and Type B subtype #1, and R. Watkins preferred Type A subtype #5 in their respective publications. A comprehensive list of the publishers and their works can be found in Appendix 1.

Graph 2 Frequencies of the Luborsky & Ingram 1998 visual subtypes (Type A)**Graph 3** Frequencies of the Luborsky & Ingram 1998 visual subtypes (Type B)

Graph 4 Frequencies of the Luborsky & Ingram 1998 visual subtypes (Type D: Planet-Man)



5.3 Contents

This section introduces the analysis done on the contents of the Early Modern printed almanacks that are in the immediate vicinity of the illustrated Zodiac man figure: 5.3.1 discusses the textual labels given to the publications alongside their frequencies whereas 5.3.2 focuses on the topical labels given to the almanacks and their frequencies.

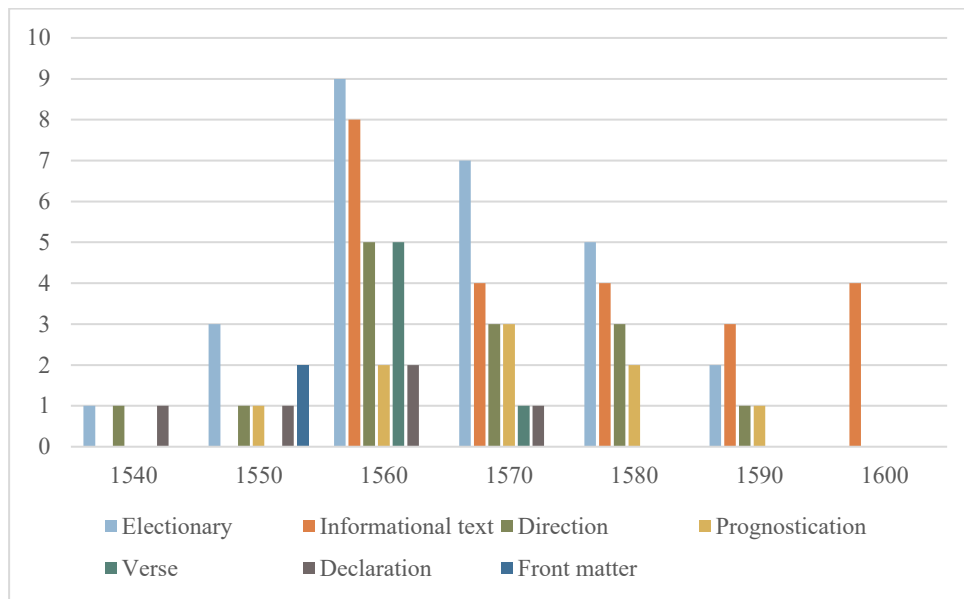
5.3.1 Textual labels

As discussed in the previous chapter, the division into textual and topical labels was inspired by studies by Suhr (2011) and Ratia & Suhr (2017) but I did the classification based on the contents and what I considered to be suitable for this current study. Textual label here refers to the words carrying certain topical, structural, and discourse features. Topical labels further specify the exact topic of text i.e. the information that the text provides the reader. This raised some issues as with some cases it is difficult to make a clear distinction between the two labels (e.g. electionaries could also be treated as both textual and topical labels as they contain both the expectations of a certain style and type of text but are also a separate topic of discourse in some instances) and especially the topical labels are very content-dependent. What is noteworthy is that I often gave multiple textual labels to a single almanack as the types of text surrounding the image differ stylistically among themselves, for example one spread in almanack 462.7 contains both informational text and verse. That being said, the most popular textual labels (or text types) that are associated with the image of the Zodiac

man in the Early Modern printed almanack were clearly Electionaries and Informational text. Electionaries were distributed quite evenly throughout the sixteenth century, but what was interesting was that while Informational texts were also somewhat evenly distributed through the 1500s, in the 1560s and especially in the 1590s there were concentrations of almanacks where the sole textual label associated with them was this one. Other textual labels assigned were Directions, Prognostication, Verse, Declaration, and Front matter (information containing page with a layout which resembles those of front matters in e.g. books and almanacks). The textual labels and their frequencies are presented in Table 7 and Graph 3 below as such: the labels in the Textual label column are relevant to the number of almanacks presented in the Frequency column. Other features related to the contents in the vicinity of the Zodiac man figure are presented in Appendix 2.

Table 7 Frequencies of the textual labels in the materials

Textual label	Frequency
Electionary	27
Informational text	23
Directions	14
Prognostication	9
Verse	6
Declaration	5
Front matter	2
Total number of textual labels	86

Graph 5 Frequencies of the textual labels in the materials

5.3.2 Topical labels

The almanacks were classified with multiple different topical labels that highlight the topics covered in them. This was done by close reading of the contents and looking for keywords in the surrounding texts. The rationale behind choosing the keywords was that they had to be either related to some type of action (lexical verbs e.g. planting or cupping) or a specific area of interest (nouns e.g. astrology or weather). For example, almanack 451 (STC 451) contains a variety of topics ranging from phlebotomy and purgation to shearing and bathing. Not surprisingly the two most frequent topical labels were Anatomy and Astrology, as the immediate textual context of the Zodiac man illustration or even the illustration itself (with the help of paratextual elements) depicts the human anatomy and astrological information. I came up with 29 topical labels altogether, the frequencies of which can be found in Table 8. As most of the almanacks that were examined contained Electionaries, it is hardly surprising that the most popular topical labels highlight this: as Electionaries are to do with choosing the correct time to pursue an action, it would then only be natural that e.g. phlebotomy, purgation, and bathing are often mentioned in these. Something that was a bit surprising to me was that surgical operations were discussed only in a few of these, as multiple sources (e.g. Bober 1948, 12; Clark 1982, 13; Witherden 2017, 96) state that almanacks were a necessary possession among surgeons and often used as quick references. This on the other hand underlines the importance of the Zodiac man illustration: even though the actual text does very rarely contain anatomical or surgical information, the illustration and its paratext often

offer the reader this missing piece of information. Other features related to the contents in the vicinity of the Zodiac man figure are presented in Appendix 2.

Table 8 Frequencies of the topical labels in the materials

Topical label	Frequency
Anatomy	48
Astrology	47
Celestialities	28
Phlebotomy	26
Purgation	23
Planting	22
Bathing	20
Sowing	19
Cutting hair	17
Grafting	17
Humours	17
Gelding	15
Timber	12
Copulating	9
Exercising	9
Medicine	8
Weather	7
Hunting	4
Husbandry	4
Virtues	4
Building	3
Fairs	3
Fishing	3
Surgery	3
Maritime activities	2
Travelling	2
Cupping	1
Disease	1

Harvesting	1
Total number of topical labels	375

Usually the contents related to the different textual labels (or text types) differ quite a lot, but an interesting trend that arose was that when the only textual label the almanack was assigned with is Informational text, the only topical labels assigned with these were Astrological and Anatomical (especially in the late 1570s and early 1580s, and in the beginning of the seventeenth century). This can be interpreted as the image serving as a more of an illustrational purpose in the text in these almanacks where the immediate surroundings include no text referring to the picture or the usual themes that are covered with the image. What is notable as well is that most of these deviant, rarer almanacks contain a version of a Zodiac Man Type A subtype (seven numbers of instance out of eleven, three of which were of the subtype A #1), meaning that when used for aesthetic reasons, the images are quite similar among themselves. Interestingly enough, according to EEBO eight out of these eleven almanacks were printed or published by the same person: R. Watkins (assigned by J. Roberts). Even though he did not use the same exact woodcut for all of his publications he clearly preferred this Type A Zodiac man illustration style. Otherwise it is safe to say that excluding these few exceptions, based on the contents of the contexts surrounding the Zodiac man illustration, the woodcut relates to the texts and the topics covered in them. Another noteworthy fact about these materials is that the almanacks under the STC numbers 435.39, 435.41, 435.43, 435.45, 435.47, 435.49, 435.51, 435.53, and 435.55 all contain the exact words “[...] in the yeare of our Lord 1555.” when actually none of these were published in the year 1555. The context in which these words are used however is an example of what a month looks like in the general calendar included later on in the almanack, so the case with this is not so much about a printing error than purely copying a text word for word into different versions of the same almanack during a 36-year timespan in the hand of three different publishers (T. Geminus, T. Marsh, and T. Orwin).

6 Results and discussion

6.1 Results

The present study aimed to first find and identify patterns in the multimodal and multilingual contents in the vicinity of the Zodiac man image (i.e. the extent of variation, like in Witherden 2017), and second observe any possible diachronic change in them (like in Suhr & Ratia 2017). The results of this study indicate that when it comes to languages and linguistic elements, unlike hypothesised the ongoing vernacularisation process is not significantly visible in the materials – in other words, the amount of loanwords and other languages besides English decrease only very little during the sixteenth century. The multiplicity of the languages where these terms were borrowed from, and the many different spelling of these indicate certain ambivalence regarding this new vocabulary. A lot of the new (astrological) terminology comes unsurprisingly from Latin and French, which were hugely impactful in the development of the present-day English lexicon. The results suggest very minimal diachronic change in the time period.

Unlike the linguistic elements, the visual elements demonstrate more changes in the materials: the frequencies of the visual types and the subtypes of those fluctuate quite a bit in the century, but there are some patterns and changes detectable. Towards the end of the sixteenth century, there is a notable decrease in the popularity of the Zodiac man types B and especially D: Planet-Man. The lessening numbers of instances of Planet-Man suggest that during the time period there was even a not-so-subtle change from the more intricate designs and planetary information carrying Planet-Man design towards the more visually simpler design styles (Type A and Type B). These are more versatile in use as they disregard the planetary information and are simpler and more straight-forward in their respectful styles (especially Type A is a much more minimalist design compared to Type D). This indicates a shift towards a simpler design in the illustrations. In the latter half of the century there is a multiplicity of subtypes in use, only for the number to be decreased into two towards the early seventeenth century. Of course the amount of materials decrease towards the next century as well, rendering the previous observation less significant. Again, you can find examples of these main types in the Appendices (Appendix 3, Appendix 4, and Appendix 5).

Likewise, the contents of the almanacks are not as persistent to change as the languages. The contents were observed through textual and topical labels. There is a similar trend happening with the contents of the almanacks as with the visual elements: a shift in the opposite direction from astrological material. The labels move from electionary types of texts to more informational, yet towards less astrological contents. There is a pattern detectable in the relationship between the verbal and visual elements of the almanacks: where the contents are less of an astrological kind, the Zodiac men act more illustrational and vice versa. What is also noteworthy is that when the contents are more astrological, there is more variation in the illustrational types (and their subtypes) indicating that whenever the Zodiac man serves a more illustrational purpose, the images are more similar among each other. This suggests that there is actually less artistical variation when the image is an illustration. With the more informational pictures then we get to observe a lot more variety stylistically. The next section discusses the limitations there were to this study, and relates the results to those of the previous studies mentioned earlier.

6.2 Limitations, previous, and future research

There were some issues and limitations to this study, both because of the scope of the study and the limited set of materials, and here I would like to propose ways in which this study could be complemented in future research. It would have been very interesting to do more extensive research of the history and the evolution of the English calendars and almanacks as this study only briefly touches the surface on this topic. There could have also been a more inclusive study of the loanwords and languages of origin in the set of materials, as now this study only covers astrological and zodiacal terminology in terms of loanwords, and the etymological origins are discarded in some of the instances instead of word-endings. The materials could have also been expanded to the whole range of contents in the Early Modern printed almanacks. Perhaps some of these then could be analysed on the page level (in the style of Hiippala 2016) as was first intended in the present study as well. Another clear limitation is the chosen set of almanacks – this thesis only makes use of one database, and further a ready-made list or collection of almanacks. There is also the issue with the photocopied microfilms: red ink sometimes turns nearly invisible restricting the use of some sources. Combining other databases and conducting further searches in collecting the materials would also result into a more comprehensive study. What is also noteworthy is that this study makes use of the Luborsky & Ingram model in almost the same exact set of data: to better assess the applicability of the model it should be tested on a different set of data as well.

Indeed there were no ruling patterns like in Witherden's 2017 study to analyse (but similar in the way that here I also looked at the extent of variation in the materials), but this was done more in the style of Peikola and Varila 2023 article in the sense that this was also analysis on the multimodal and multilingual practices, though the period differs by a measly hundred years and the present study is focused on almanacks instead of calendars and calendar entries. There are some similarities in the results: as with their study (2023), I found out that the visual context of the Zodiac man image (whether informational or illustrational) determines a great deal of the verbal contents of the vicinity. Had I studied other contents of the almanacks as well, this study could have better determined whether the other contexts (besides that of the immediate of the Zodiac man figure) affects the linguistic elements and visual cues as well.

Suhr (2011) and Ratia and Suhr (2017) investigate texts with similar audiences, but their systems of topical and textual highlighting were modified for the use of the present study. The relationships in verbal and visual communication are not necessarily more prominent but a bit different when the focus is on highlighted words instead of illustrations and their paratext. Also the thing that facilitates studying pamphlets and title pages is that the examined terminology is highlighted, in different sizes, type fonts, and sometimes even colours. Studying emerging patterns in a set of longer texts requires close reading and determining the labels sometimes based on the contents instead of the highlighted words (that being said, sometimes there are words highlighted in different type fonts even in almanacks). What the present study has in common with Suhr 2011 is that the results suggest that the intended audience does tend to modify the genre itself. As the mass production and accessibility of the almanacks accelerate in the sixteenth century, this means that the audience becomes even wider and more varied as the contents are simplified. The images become simpler and the contents drift further from astrology and astronomy towards information regarding daily life.

7 Conclusions

The aim of this study was to shed light on the kinds of contexts in which the sixteenth century woodcut image of the Zodiac man appear in the Early Modern English printed almanack, and what kind of visual and linguistic elements can be identified from those immediate textual contexts. The sixteenth century was the beginning of the golden age of printed almanacks, pamphlets, booklets, and books since the arrival of the printing press, making it the perfect period of time to look at the vernacularisation processes. A collection of Early Modern English almanacks, 48 altogether, was gathered from the Early English Books Online database with the help of the Luborsky and Ingram 1998 book: *A guide to English illustrated books, 1536–1603*. The materials were viewed in the context of the visual categories coined by Luborsky and Ingram (1998). The applicability of these categories was analysed. Astrological and zodiacal terminology were analysed by their languages of origin with the help of the Oxford English Dictionary. The analysed almanacks were also given textual and topical labels in the style of Suhr 2011 with slight alterations, and the contents of the materials were viewed through these labels.

The goal was to examine patterns and changes in the specific set of almanacks. Language-wise and linguistically there were no patterns of significant interest, and the diachronic change was also minimal. However, the visual elements suggest that during the time period, 1500s, there was a shift towards simplicity and versatility in the visual aspects. The analysis of the contents indicates that during the same period, the themes discussed in the almanacks shift further from astrological contents and towards more general information. The results also show a relationship between the verbal and visual elements: the context of the Zodiac man illustration (textual labels) determines the themes (topical labels) to some extent.

The Early Modern printed almanack is the perfect publication for examining development of verbal and visual features as the regular publication was widely popular and accessible to many, whereas the significance of studying the relationship between verbal and visual elements comes from the ability to assess the social functions and intended audiences of texts. Studying the multimodality of text and the relationship between text and images is a fairly recent phenomenon, and there is a lot more left to study in the field in the future of linguistics. These kinds of studies show that even as early as in Medieval and Early Modern texts there is clear intention behind the page-level design and word-choices. This makes the topic also historically relevant regarding literary history.

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Appendices

Appendix 1 Works mentioned in Luborsky & Ingram 1998

Year of publication	STC-number	Publisher	Available on EEBO	Readable	Zodiac Man
1537	513	widow of C. Ruremond	x	x	x
1541	473	J. Redman	x	x	
1547	507.11	N. Hill f. R. Kele	x		x
1548	470	S. Mierdman? F. R. Jugge	x	x	
1549	398.3	n.p.	x	x	
1549	398.5	T. Raynald f. J. Turke			
1549	522.20	Kasper f. J. Turke			
1551	464	N. Hill f. J. Turke	x	x	x
1551	464.3	J. Oswen	x		x
1552	507.17	N. Hill f. J. Turke			
1553	462	N. Hill f. J. Turke	x		x
1555	447.7	J. Kingston a. H. Sutton	x		x
1555	435.35	T. Geminus	x		
1555	410.7	T. Marsh	x		x
1556	435.39	T. Geminus	x	x	x
1558	482	T. Marsh?	x		x
1558	432	J. Day	x		x
1559	520	T. Marsh	x	x	x
1559	492	H. Sutton f. L. Harrison	x		x
1560	506	O. Rogers	x	x	x
1560	521	L. Vaughan			
1560	458	T. Marsh			
1561	521.5	T. Marsh	x		x
1562	509	J. Waley	x	x	x
1562	510	J. Waley	x	x	x
1563	492.9	n.p.	x	x	x
1564	435.41	T. Marsh	x	x	x

1564	432.5	R. Hall	x	x	x
1564	492.11	n.p.	x	x	x
1564	492.13	n.p.			
1565	462.5	H. Denham for W. Pi	x	x	x
1566	433	R. Serle f. W. Jones	x	x	x
1567	415	H. Bynneman			
1567	435.43	T. Marsh	x	x	x
1567	422	J. Kingston f. G. Dewes	x	x	x
1567	484	J. Kingston f. H. Sanderson	x		x
1568	422.3	J. Kingston f. G. Dewes	x	x	x
1568	462.7	H. Wykes f. W. Pickering	x	x	x
1568	511	T. Marsh	x	x	x
1569	422.4	J. Kingston f. G. Dewes			
1569	463	J. Kingston f. W. Pickering	x		x
1569	482.9	T. Marsh	x	x	x
1569	511.3	T. Marsh	x	x	x
1571	449	H. Bynneman	x	x	x
1571	485	H. Bynneman f. H. Saunderson	x	x	x
1571	454	H. Denham	x	x	x
1571	422.5	R. Watkins	x	x	x
1571	511.7	T. Marsh	x	x	x
1572	459.5	R. Watkins a. J. Roberts	x		x
1572	459	R. Watkins a. J. Roberts	x		x
1574	512	R. Watkins a. J. Roberts	x	x	
1574	435.45	T. Marsh	x	x	x
1576	435.47	T. Marsh	x	x	x
1578	435.49	T. Marsh	x	x	x
1579	488.5	R. Watkins a. J. Roberts	x	x	x
1579	512.7	R. Watkins a. J. Roberts	x	x	x
1580	512.9	R. Watkins a. J. Roberts	x		x
1581	488.7	R. Watkins a. J. Roberts	x	x	x
1581	491.5	R. Watkins a. J. Roberts	x		x

1582	480.3	R. Watkins a. J. Roberts	x	x	x
1583	435.51	T. Marsh	x	x	x
1584	423	R. Watkins a. J. Roberts			
1584	455	R. Watkins a. J. Roberts	x	x	x
1584	402.5	R. Watkins a. J. Roberts			
1585	435.53	T. Marsh	x	x	x
1585	444	R. Watkins a. J. Roberts			
1585	480.5	R. Watkins a. J. Roberts			
1588	451	R. Watkins a. J. Roberts	x	x	x
1589	423.3	R. Watkins a. J. Roberts	x	x	x
1589	444.4	R. Watkins a. J. Roberts	x		x
1589	451.2	R. Watkins a. J. Roberts	x	x	x
1589	455.7	R. Watkins a. J. Roberts	x	x	x
1590	423.5	R. Watkins a. J. Roberts	x	x	x
1590	444.6	R. Watkins a. J. Roberts			
1591	451.4	R. Watkins a. J. Roberts	x	x	x
1592	435.55	T. Orwin	x	x	x
1593	428	R. Watkins a. J. Roberts	x		x
1593	444.10	R. Watkins a. J. Roberts	x	x	x
1594	526	R. Watkins a. J. Roberts	x		x
1595	445	R. Watkins a. J. Roberts	x	x	
1596	435.57	Widow Orwin	x		x
1597	445.2	R. Watkins a. J. Roberts	x	x	
1598	424.7	R. Watkins a. J. Roberts			
1598	525.2	R. Watkins a. J. Roberts	x	x	x
1598	445.3	R. Watkins a. J. Roberts	x	x	
1598	445.4	R. Watkins a. J. Roberts	x	x	
1599	425	T. Dawson, assent of R. Watkins & J. Roberts	x		x
1599	445.5	R. Watkins a J. Roberts	x		x
1600	525.5	R. Watkins a. J. Roberts	x	x	x
1601	525.6	T. Dawson f. E. White assigne of J. Roberts	x		x

1602	434.14	E. White, assigne of J. Roberts	x		x
1602	501.2	E. White, assigne of J. Roberts	x	x	x
1602	483	E. White, assigne of J. Roberts			
1602	525.7	f. E. White, assigne of J. Roberts	x	x	x
1602	532	f. E. White, assigne of J. Roberts	x	x	x
1603	501.3	E. White, assigne of J. Roberts	x	x	
Total number			80	56	71

Appendix 2 Contents and features of the context of the figure

Y = Year of publication

S = STC number

T = Luborsky & Ingram Type

ZL = Zodiacal signs in Latin

ZE = Zodiacal signs in English

L = Additional languages

FR = French

ITA = Italian

Y	S	T	ZL	ZE	L	Textual labels	Topical labels
1537	513	Type A #1	x			Electionary, Declaration, Directions	Celestialities, Phlebotomy, Surgery, Cutting hair, Medicine, Bathing, Anatomy, Astrology
1551	464	Type A #1	x			Electionary, Directions, Front Matter, Declaration	Celestialities, Medicine, Planting, Sowing, Phlebotomy, Astrology, Anatomy, Grafting, Weather

1556	435.39	Type B #1	x			Electionary, Prognostication	Celestialities, Astrology, Phlebotomy, Purgation, Bathing, Timber, Sowing, Planting, Cutting hair, Exercising, Copulating, Anatomy, Shearing, Gelding, Grafting, Humours
1559	520	Type A #2	x			Electionary, Front matter	Purgation, Medicine, Astrology, Celestialities, Anatomy, Humours
1560	506	Type A #1	x			Informational text	Astrology, Anatomy, Celestialities, Fairs
1562	509	Type A #1	x		FR	Electionary, Directions	Astrology, Anatomy, Celestialities, Purgation, Planting, Cutting hair, Hunting, Phlebotomy, Disease

1562	510	Type A #1	x	x		Informational text	Astrology, Anatomy, Humours
1563	492.9	Type A #3	x			Informational text	Astrology, Anatomy, Celestialities
1564	432.5	Type D: Planet- Man #1b	x	x	ITA	Verse, Declaration, Electionary	Celestialities, Astrology, Anatomy, Purgation, Medicine, Phlebotomy, Humours, Virtues
1564	435.41	Type B #1	x			Electionary, Prognostication	Celestialities, Astrology, Phlebotomy, Purgation, Bathing, Timber, Sowing, Planting, Cutting hair, Exercising, Copulating, Anatomy, Shearing, Gelding
1564	492.11	Type D: Planet- Man #2	x			Informational text, Electionary, Directions	Astrology, Anatomy, Phlebotomy, Medicine, Humours

1565	462.5	Type D: Planet- Man #1d	x			Informational text	Astrology, Anatomy, Celestialities, Purgation, Phlebotomy, Fairs, Sowing, Planting, Maritime activities, Gelding, Grafting
1566	433	Type D: Planet- Man #1b	x	x	ITA	Verse, Declaration	Anatomy, Astrology, Celestialities, Medicine, Phlebotomy, Humours, Virtues
1567	422	Type B #2	x	x	FR	Directions, Electionary, Verse	Phlebotomy, Celestialities, Purgation, Astrology, Anatomy, Gelding, Planting, Sowing, Bathing, Grafting

1567	435.43	Type B #1	x			Electionary, Prognostication	Celestialities, Astrology, Phlebotomy, Purgation, Bathing, Timber, Sowing, Planting, Cutting hair, Exercising, Copulating, Anatomy, Shearing, Gelding, Grafting, Humours
1568	511	Type D: Planet- Man #1c	x		FR	Electionary, Directions	Purgation, Phlebotomy, Celestialities, Astrology, Anatomy, Sowing, Planting, Bathing, Cutting hair, Hunting, Fishing, Building, Riding, Weather, Surgery
1568	422.3	Type A #1	x			Verse, Electionary	Bathing, Astrology, Purgation, Anatomy

1568	462.7	Type D: Planet- Man #1a	x	x		Informational text, Verse	Astrology, Anatomy, Fairs, Maritime activities, Celestialities
1569	482.9	Type D: Planet- Man #1c	x			Informational text	Anatomy, Surgery, Celestialities, Weather, Phlebotomy
1569	511.3	Type D: Planet- Man #1c	x	x	FR	Informational text, Electionary, Directions	Astrology, Anatomy, Purgation, Phlebotomy, Sowing, Planting, Bathing, Hunting, Fishing, Building, Travelling, Celestialities, Weather, Cutting hair, Humours, Grafting
1571	449	Type A #1	x		FR	Directions, Electionary	Astrology, Anatomy, Phlebotomy, Purgation, Bathing, Sowing, Harvesting, Gelding, Cutting hair, Grafting, Virtues

1571	454	Type B #3	x	x	FR	Directions, Electionary	Purgation, Phlebotomy, Bathing, Sowing, Planting, Astrology, Anatomy, Grafting, Humours
1571	485	Type A #1	x		FR	Informational text	Astrology, Anatomy, Weather
1571	422.5	Type D: Planet- Man #1a	x		FR	Verse, Declaration, Electionary	Astrology, Anatomy, Gelding, Planting, Medicine, Celestialities, Virtues
1571	511.7	Type D: Planet- Man #1c	x	x		Informational text, Electionary, Directions	Astrology, Anatomy, Purgation, Phlebotomy, Sowing, Planting, Bathing, Hunting, Fishing, Building, Travelling, Celestialities, Weather, Cutting hair, Humours, Grafting

1574	435.45	Type B #1	x			Electionary, Prognostication	Celestialities, Astrology, Phlebotomy, Purgation, Bathing, Timber, Sowing, Planting, Cutting hair, Exercising, Copulating, Anatomy, Shearing, Gelding, Grafting, Humours
1576	435.47	Type B #1	x			Electionary, Prognostication	Celestialities, Astrology, Phlebotomy, Purgation, Bathing, Timber, Sowing, Planting, Cutting hair, Exercising, Copulating, Anatomy, Shearing, Gelding

1578	435.49	Type B #1	x			Electionary, Prognostication	Celestialities, Astrology, Phlebotomy, Purgation, Bathing, Timber, Sowing, Planting, Cutting hair, Exercising, Copulating, Anatomy, Shearing, Gelding, Grafting, Humours
1579	488.5	Type A #1	x			Informational text	Astrology, Anatomy
1579	512.7	Type A #1	x	x		Informational text	Astrology, Anatomy
1581	488.7	Type A #4	x			Informational text	Astrology, Anatomy
1582	480.3	Type A #5	x			Informational text	Astrology, Anatomy

1583	435.51	Type B #1	x			Electionary, Prognostication	Celestialities, Astrology, Phlebotomy, Purgation, Bathing, Timber, Sowing, Planting, Cutting hair, Exercising, Copulating, Anatomy, Shearing, Gelding, Grafting, Humours
1584	455	Type A #5	x		FR	Directions, Electionary	Planting, Timber, Shearing, Phlebotomy, Cupping, Bathing, Purgation, Medicine, Weather, Astrology, Anatomy, Grafting

1585	435.53	Type B #1	x			Electionary, Prognostication	Celestialities, Astrology, Phlebotomy, Purgation, Bathing, Timber, Sowing, Planting, Cutting hair, Exercising, Copulating, Anatomy, Shearing, Gelding, Grafting, Humours
1588	451	Type A #5	x		FR	Directions, Electionary	Husbandry, Phlebotomy, Purgation, Celestialities, Astrology, Bathing, Cutting hair, Anatomy, Shearing, Humours, Grafting, Planting
1589	423.3	Type A #5	x			Informational text	Astrology, Anatomy, Celestialities

1589	451.2	Type A #5	x		FR	Electionary, Directions	Phlebotomy, Purgation, Celestialities, Astrology, Anatomy, Bathing, Cutting hair, Sowing, Planting, Shearing, Timber, Gelding, Humours, Grafting
1589	455.7	Type A #5	x			Informational text	Astrology, Anatomy
1590	423.5	Type A #5	x			Informational text	Astrology, Anatomy
1591	451.4	Type A #1a	x		FR	Electionary, Directions	Astrology, Anatomy, Planting, Shearing, Timber, Gelding, Husbandry, Sowing

1592	435.55	Type B #1	x			Electionary, Prognostication	Celestialities, Astrology, Phlebotomy, Purgation, Bathing, Timber, Sowing, Planting, Cutting hair, Exercising, Copulating, Anatomy, Shearing, Gelding
1593	444.10	Type A #2	x			Informational text	Astrology, Anatomy
1598	525.2	Type A #2, State 2	x			Informational text	Astrology, Anatomy, Grafting, Humours
1600	525.5	Type B #3				Informational text	Astrology, Anatomy
1602	532	Type D: Planet- Man #1d	x			Informational text	Astrology, Anatomy
1602	501.2	Type B #3	x	x		Informational text	Astrology, Anatomy
1602	525.7	Type D: Planet- Man #1d	x			Informational text	Astrology, Anatomy

Appendix 3 Zodiac Man Type A Subtype 5



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Appendix 4 Zodiac Man Type B Subtype 3

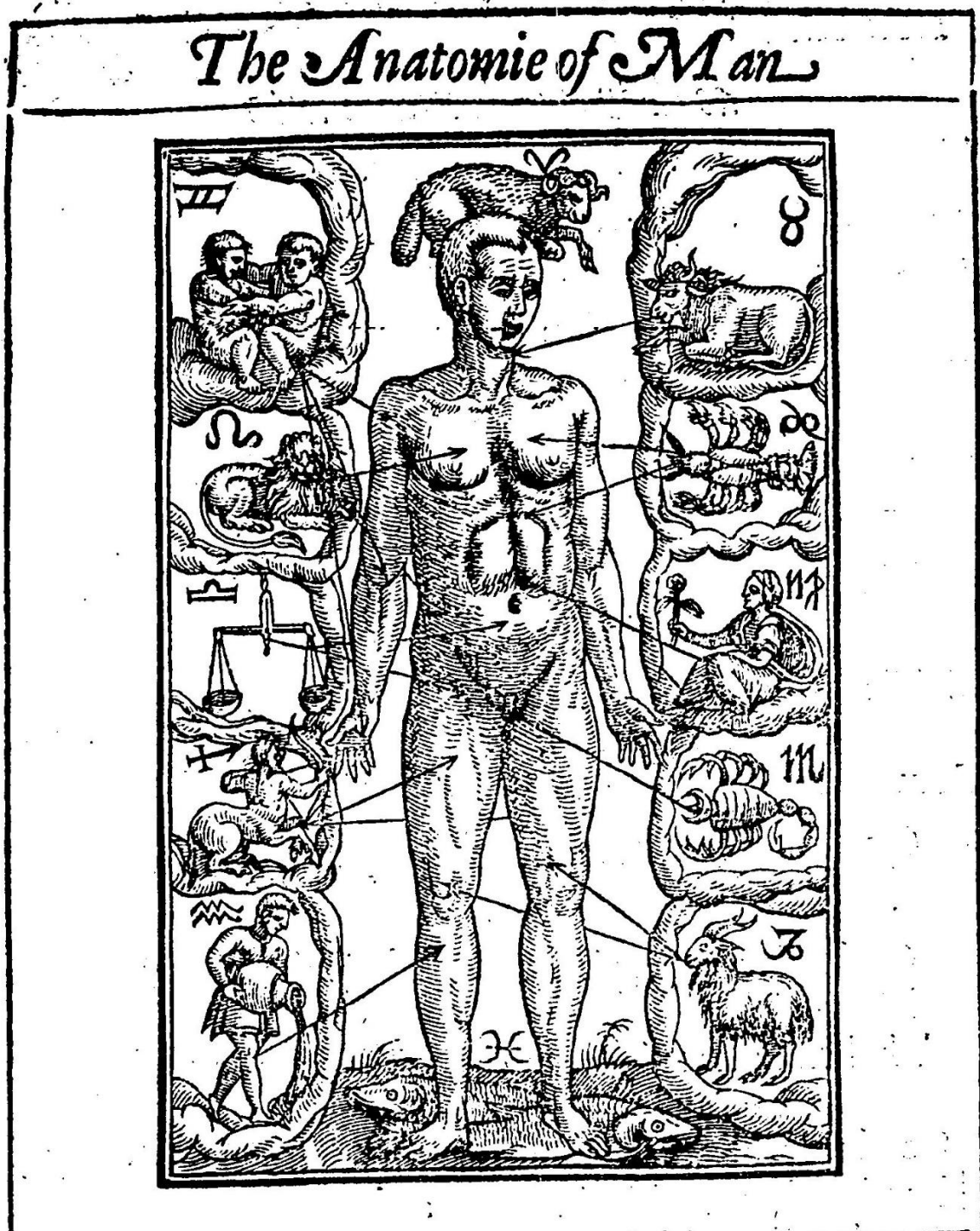


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Appendix 5 Zodiac Man Type D: Planet-Man Subtype 1a

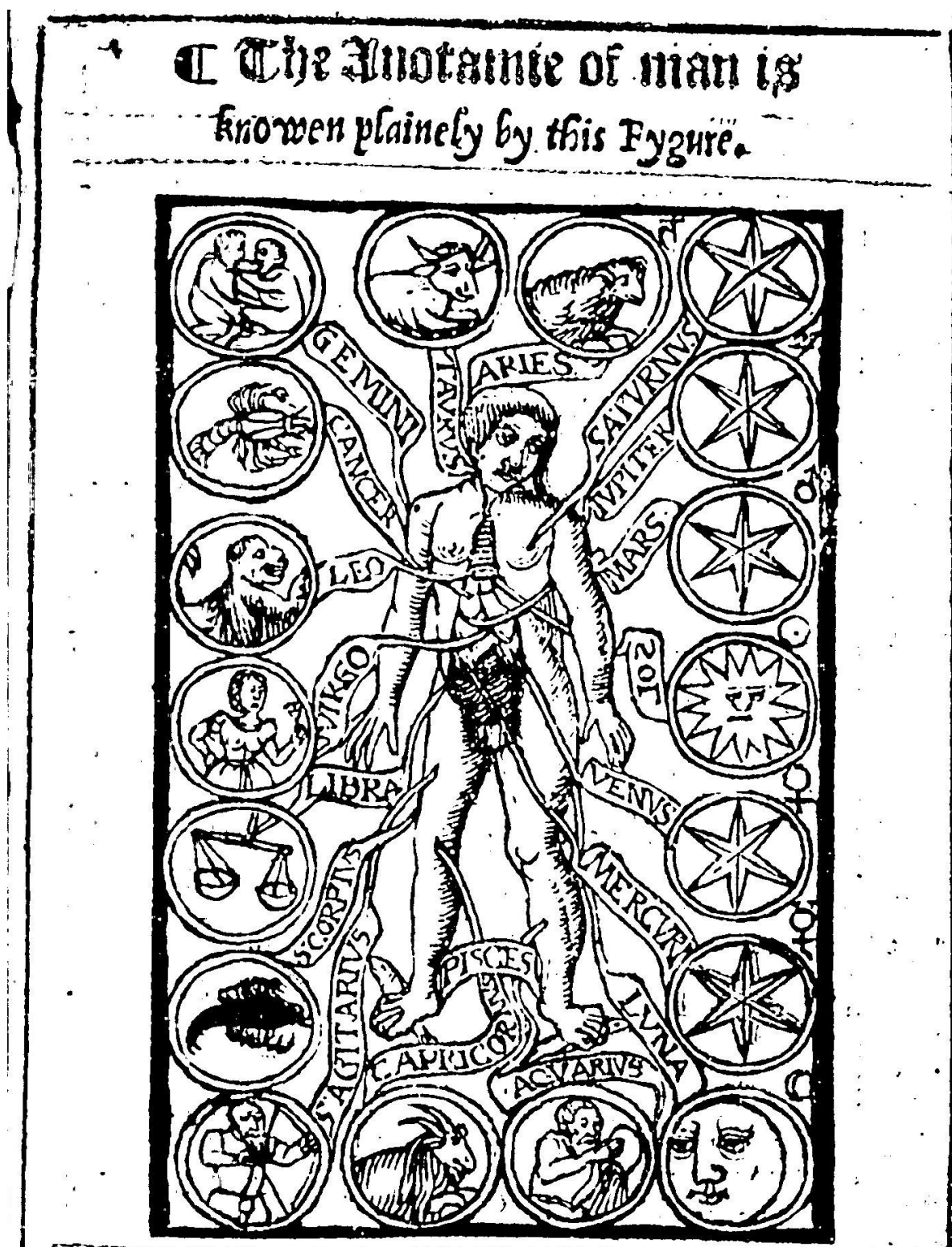


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Appendix 6 Finnish Summary

Johdanto

Tämän tutkielman tarkoitus on selvittää millaisia kielellisiä, visuaalisia, ja sisällöllisiä elementtejä varhaismodernissa Englannissa julkaistuissa almanakoissa esiintyy *Zodiac man* -nimisen puupiiirroksen ympärillä. Tarkasteltava aikaväli on 1537–1603. Kirjapainon saapuminen varhaismoderniin Englantiin käynnisti tapahtumien sarjan, jonka seurauksena kieli alkoi standardisoitua ja kirjallisuutta oli mahdollista tuottaa paljon ja nopeasti. Vaikka almanakat olivat hyvin laajalle levinneitä ja paljon luettuja Englannissa varhaismodernilla aikakaudella, niitä ei ole tutkittu vielä kovin kattavasti. Tässä työssä lähestymistavaksi almanakkojen tutkimukseen on valittu usein näissä almanakoissa esiintyvä puupiiirrostyyppi ja sitä ympäröivät tai siihen liittyvät tekstit. Kuvia ympäröivät tekstit antavat hyvän yleiskuvan varhaismodernista englannin kielestä, ja tätä kautta on mahdollista tarkastella visuaalisten ja sisällöllisten elementtien lisäksi myös mahdollista kielellistä muutosta. Visuaalisten ja kielellisten elementtien tutkiminen suhteessa toisiinsa on ajankohtainen tutkimusaihe tällä hetkellä kielitieteen kentällä. Materiaali (48 almanakkaa) on kerätty Early English Books Online (EEBO) -nimisestä tietokannasta Luborskyn ja Ingramin 1998 ilmestyneen teoksen (*A guide to English Illustrated books, 1536–1603*) ja siinä listattujen katalogikoodien (*STC numbers*) avulla. Luborskyn ja Ingramin luokittelun lisäksi tässä työssä on analysoitu almanakkojen kielellisiä ja sisällöllisiä piirteitä *tekstitunnisteiden* avulla (Suhr 2011; Ratia ja Suhr 2017). Tavoitteena on saavuttaa mahdollisimman kattava yleiskuva sekä *Zodiac man* -puupiiirroksen kehityksestä, että sitä ympäröivien tekstien kielellisten ja sisällöllisten elementtien kehityksestä varhaismodernin aikakauden Englannissa.

Historiallinen konteksti

Keskiaikaisessa ja varhaismodernissa Englannissa oli vahvoja uskomuksia taivaankappaleiden vaikutuksesta ihmiselämään. Astrologia on moniulotteinen uskomusten järjestelmä, joka on alun perin luotu selittämään maailman toimintaa (Capp 2008, 15). Astrologia ja astronomia eivät vielä olleet eriytyneet omiksi tieteenaloikseen ja näitä kumpaakin sovellettiin mitä arkipäiväisimpien askareiden lisäksi esimerkiksi jopa lääketieteessä, kirurgiassa, ja politiikassa ennen kuin empiirisemmät tavat tehdä tieteellistä tutkimusta nousivat suosioon keskiajan jälkeen (Capp 2008; 18, 180, 184, 191). Yksi tapa tulkita taivaankappaleiden toimintaa oli luottaa *Zodiac man* -piirroksen: piirroksessa esiintyy alaston mieshahmo, yleensä kädet ja jalat harallaan (Clark 1982). Kuva heijasti astrologisia uskomuksia siitä, että

jokaista ihmisen ruumiinosaa hallitsee tietty taivaankappale (ja sitä kautta horoskooppi-merkki) (Luborsky ja Ingram 1998, 114). Kuvissa saattoi myös olla horoskooppi-merkkejä tai planeettojen merkkejä piirretty hahmon päälle tai ympärille. Oli tärkeää selvittää missä suhteessa kuu oli näihin taivaankappaleisiin, sillä keskiajalla ja varhaismodernissa Englannissa uskottiin, että olisi jopa vaarallista hoitaa kirurgisesti tiettyjä ruumiinosia tai epäsuotuisaa leikata hiuksia tai partaa tiettyinä kuukausina (Bober 1948, 10). Kuvan monipuoliset käyttötarkoitukset tarkoittivat sitä, että se löytyi hyvin monista painetuista almanakoista ja kirjasista monenlaisissa konteksteissa.

Almanakat

Keskiaikainen ja varhaismoderni almanakka oli ikään kuin pienempi, taitettava versio käsikirjoituksesta (Witherden 2017, 81; Bober 1948, 24). Tähän päivään saakka säilyneiden almanakkojen suuri määrä implikoi sitä, että tämä painettu taskukirja löytyi lähes jokaisesta varhaismodernista kotitaloudesta (Mooney 1997, 11; Capp 2008, 23). Painettujen almanakkojen levinneisyys ja suosio tekevät siitä mielenkiintoisen tutkimuskohteen varhaismodernin Englannin kielellisille, visuaalisille, ja sisällöllisille elementeille. Varhaismodernin almanakan edeltäjän voidaan katsoa olevan roomalainen kalenteri, jossa seurattiin Kristuksen elämänvaiheita kirkkopyhien kautta (Peck 2019; Clemens ja Graham 2007, 192–194; Mooney 1997, 11). Varhaismoderni almanakka ikään kuin yhdisti nämä roomalaisen kalenterin kirkkopyhät ja esimerkiksi astrologiset ennustukset yksiin kansiin tehden almanakasta tiiviin paketin yleistietoa tavallisen kalenterin ja kuun liikkeiden lisäksi. Almanakkojen suureen suosioon saattoi vaikuttaa myös se, että ne painettiin prestiisikielten (latina ja ranska) sijasta kansan kielellä (englanti). Painettujen almanakkojen tuotanto varhaismodernissa Englannissa oli myös huomattavasti halvempaa ja nopeampaa kuin käsikirjoitusten käsin kopioiminen pergamentille (Mooney 1997, 20; Werner 2019, 9–13).

Varhaismoderni englannin kieli

Englannin kielessä varhaismoderniksi ajaksi katsotaan yleensä aikaväli 1500–1700 (Nevalainen 2006, 1). Varhaismodernin englannin piirteiksi voidaan katsoa englanninkielisen sanaston nopea lisääntyminen ja vakiintuminen. Kirjoitettuja tekstejä ei voinut enää välttämättä paikallistaa pelkän sanaston ja kieliasun perusteella (Nevalainen 2006; 8, 13). Esimerkiksi lukutaitoisten ihmisten kasvavan määrän ja painettujen tekstien ilmestymisen voidaan ajatella olevan katalysaattoreita englannin kielen standardisoinnille (Görlach 1991, 5–7). Vaikka englannin kielen käyttö lisääntyi varhaismodernissa englannissa, kieleen lainattiin

paljon sanastoa esimerkiksi latinan, saksan, ranskan ja kreikan kielestä (Nevalainen 2006; 30, 50). Yksi tapa arvioida varhaismodernin englannin kielen kehitystä on tutkia lainasanojen määrää ja alkuperää: tässä työssä se tehdään Zodiac man -piirrosten ympäristöstä Oxford English Dictionaryn (OED) avulla.

Tutkimusmateriaali ja menetelmät

Tutkimusmateriaali on kerätty EEBO-tietokannasta, joka sisältää suurimman osan Brittein saarilla ja Pohjois-Amerikassa painetuista teksteistä aikavälillä 1470–1700. Suurin osa teksteistä on skannattu mikrofilmiltä ja tallennettu pdf-muodossa. Tähän sisältyy muutamia haasteita: monissa teksteissä käytetty punainen muste häviää osittain tai jopa kokonaan valokopioitaessa. Materiaali on koottu Luborskyn ja Ingramin *A guide to English Illustrated books, 1536–1603* (1998) -teoksen avulla. Teokseen on koottu Zodiac man -piirroksia sisältäviä almanakkoja ja niiden katalogikoodit. Syöttämällä katalogikoodit EEBO:n hakukoneeseen saa käsiinsä juuri ne tietyt almanakat, joita edellä mainitussa teoksessa on käsitelty. Kaikki almanakat eivät kuitenkaan olleet saatavilla EEBO:ssa enää tätä tutkimusta tehdessä (tai ne olivat lukukelvottomassa kunnossa), joten ne jätettiin tämän tutkimuksen ulkopuolelle. Osassa myös oli tutkimuksen kannalta väärän tyylisiä kuvia Zodiac maneista. Tutkimukseen valikoitui lopulta 48 lukukelpoista ja tyyliltään sopivaa almanakkaa.

Tutkimuksessa analysoitiin visuaalisia, kielellisiä, ja sisällöllisiä piirteitä Zodiac man -kuvia ympäröivästä tekstistä. Visuaalisessa analyysissä käytettiin myös apuna Luborskyn ja Ingramin teosta: teoksessa Zodiac man -piirrokset on luokiteltu tarkasti piirrostyylin ja kuvan elementtien perusteella tyyppeihin ja alatyyppeihin. Työssä analysoidaan näiden kategorioiden toimivuutta ja esiintymismääriä 1500-luvulla. Kielellisiä piirteitä analysoidaan tutkimalla vieraskielisiä astrologiaan ja horoskooppeihin liittyviä lainasanoja ja almanakoissa käytettyjä kieliä OED:n avulla. Sisällöllinen analyysi perustuu Suhrin (2011) sekä Ratian ja Suhrin (2017) tapaan jakaa tekstityyppejä ja teemoja tekstitunnisteisiin. Tekstitunnisteiden käsitettä on sovellettu tähän tutkimukseen sopivaksi: tässä työssä tekstit on jaoteltu sekä tekstityypeittäin (*textual labels*, esimerkiksi ennustusteksti tai ohjeteksti) että teemoittain (*topical labels*, esimerkiksi astrologia tai metsästys). Myös kaikkien näiden piirteiden (visuaaliset, kielelliset, ja sisällölliset) esiintymismääriä ja niiden vaihteluita analysoidaan 1500-luvun ajalta. Tutkimusmateriaalin käsittelyssä on käytetty apuna Tropy-nimistä ohjelmaa, jonka avulla kuvatiedostoja voidaan luokitella ja niihin voi lisätä aihetunnisteita.

Tulokset ja pohdinta

Tulokset on jaoteltu tässä tutkimuksessa kolmeen osioon:

Kielelliset elementit

Almanakoissa horoskooppimerkkejä kuvaillessa käytettiin seuraavia kieliä: latina, ranska, englantia, ja italia. Sanojen alkuperä on päätelty niiden loppupäätteistä OED:n avulla (esimerkiksi sanan 'capricornus' alkuperä on tämän analyysitavan mukaan latina ja 'capricorne' ranska). Mielenkiintoinen huomio käytetyistä kielistä on se, että ranskaa esiintyi 1500-luvulla hiukan englantia enemmän; tämä saattaa johtua ranskan kielen silloisesta prestiisi-asemasta Englannissa. Toinen huomionarvoinen asia on se, että useassa almanakassa on käytetty montaa eri kieltä saman sanan kuvailuun. Varhaismodernissa englannin kielessä tämä oli yleinen ilmiö ennen kielen standardisointia. Sanojen lopullisesta kirjoitusasusta ei välttämättä ollut vielä yksimielisyyttä, joten eri kielistä lainattuja sanoja käytettiin usein keskenään vaihtelukelpoisina. Horoskooppimerkeistä käytettyjen termien lisäksi muita astrologiaan liittyviä sanoja analysoitiin samalla tavalla loppupäätteiden perusteella ja OED:n avulla. Myös näissä sanoissa esiintyi vaihtelua kirjoitusasuissa 1500-luvulla. Sanojen esiintymismäärissä ei kuitenkaan tapahtunut niin suuria muutoksia tutkitun vuosisadan ajalla, että niistä voisi suoraan päätellä standardisointiprosessin etenemisvaiheita. Joidenkin sanojen alkuperä on jopa OED:n mukaan epäselvä: niitä saattaa olla lainattu eri kielistä eri aikoina, jolloin OED luokittelee sanalla olevan monta eri alkuperää. Varhaismodernissa Englannissa käytettiin myös paljon latinaa ja ranskaa hallintokielenä, joten tämä kolmikielisyys-aika on voinut myös myötävaikuttaa sanojen alkuperän epäselvyyteen.

Visuaaliset elementit

Luborskyn ja Ingramin visuaalisessa luokittelussa ei ilmennyt ongelmia. Visuaalisista päätyypeistä kaikkein yleisin oli Tyyppi A (horoskooppimerkit löytyvät kuvasta myötäpäivään seuraavassa järjestyksessä: oinas, kaksonen, leijona, vaaka, jousimies, vesimies, kalat, kauris, skorpioni, neitsyt, rapu, ja härkä). Alatyypien määrät olivat keskenään tasaisemmassa jakaumassa, vaikka Tyyppi A:n alatyypit olivat luonnollisesti suosituimpia. Lisäksi aineistoa tutkittiin sen perusteella, suosivatko jotkut tietyt julkaisijat tiettyjä tyyppisiä tai alatyyppejä. Tutkimuksessa analysoitiin kuuden tuotteliaimman julkaisijan käyttämiä tyyppisiä ja alatyyppejä: E. White suosi tyyppiä D, kun taas R. Watkins ja N. Hill -nimiset julkaisijat suosivat Tyyppiä A. Alatyypeistä suosituimpia olivat tyypin A

alatyypit 1 (N. Hill) ja 5 (R. Watkins), tyyppin D alatyypin 1c (T. Marsh), ja tyyppin B alatyypin 1 (T. Marsh).

Sisällölliset elementit

Almanakat jaoteltiin Suhrin (2011) sekä Ratian ja Suhrin (2017) tapaan tekstitunnisteisiin sisältönsä perusteella: laajemmalla tasolla tekstityyppeihin (*textual labels*) ja tarkemmin vielä teemoittain (*topical labels*). Määrällisesti suurimmiksi tekstityypeiksi nousivat luonnollisesti tapahtumiin liittyvät ennustustekstit (*Electionaries*) ja tietotekstit (*Informational text*).

Ennustustekstejä esiintyi melko tasaisesti koko 1500-luvun läpi samoin kuin tietotekstejä. Huomionarvoista oli se, että tietotekstejä esiintyi usein sellaisissa ryppäissä (varsinkin 1560- ja 1590-luvuilla), joissa ainoa almanakkaan liitetty tekstityyppi oli kyseinen. Muita almanakoista tunnistettuja tekstityyppejä olivat esimerkiksi ohjetekstit ja julistukset. 48 almanakalle annettiin yhteensä 7 tekstityyppiä tekstitunnisteina.

Almanakat luokiteltiin vielä tarkemmin teemoittain: jokaiseen almanakkaan liitettiin teemoittain tekstitunnisteita, jotka kuvailevat tekstin sisältöä (esimerkiksi kuppaus, *phlebotomy*, tai taivaankappaleiden liikkeiden käsittely, *celestialities*). 48 almanakalle annettiin yhteensä 29 teemoihin liittyvää tekstitunnistetta. Ei liene kovin yllättävää, että anatomia ja astrologia olivat eniten toistuvia teemoja käsiteltyjen almanakkojen kesken, sillä Zodiac man -piirros itsessään jo käsittelee usein paratekstissä anatomiaa ja horoskooppeja. Yleisimpien tekstityyppien ollessa ennustustekstejä luonnollisesti myös eniten teksteissä esiintyvät teemat liittyvät tähän: tapahtumiin liittyvät ennustustekstit käsittelevät parasta mahdollista ajankohtaa suorittaa tiettyjä asioita, kuten kuppausta tai maanviljelyä. Vaikka useat lähteet (esimerkiksi Bober 1948, 12; Clark 1982, 12; tai Witherden 2017, 96) kertovat Zodiac man -kuvaa käytettäneen kirurgiassa ja leikkauksissa apuna, oli ehkä hieman yllättävää, kuinka vähän 1500-luvulla tämän otannan almanakat käsitelivät kirurgisia teemoja.

Mielenkiintoinen huomio on myös se, että silloin kun almanakkaan on liitetty vain yksi ainoa tekstityyppi, se on usein tietoteksti, ja siihen liitetään vain kaksi teemallista tekstitunnistetta: astrologia ja anatomia. Se kertonee siitä, että tässä yhteydessä Zodiac man -piirrosta on käytetty kuvitusmielessä. Toinen huomionarvoinen asia on se, että almanakat, jotka esiintyvät katalogikoodien 435.39, 435.41, 435.43, 435.45, 435.47, 435.49, 435.51, 435.53, ja 435.55 alla sisältävät kaikki niin sanasta sanaan kopioidun tekstinpätkän kalenteriosiossa, että niissä kaikissa lukee ”herran vuonna 1555” (“[...] in the yeare of our Lord 1555.”) vaikka mitään näistä yhdeksästä almanakasta ei ole itseasiassa julkaistu 1555.

Samaa tekstiä lienee kopioitu kolmen eri julkaisijan toimesta (T. Geminus, T. Marsh, ja T. Orwin) 36 vuoden aikahaarukalla.

Tulokset

Tutkimuksen tarkoituksena oli ensisijaisesti etsiä tunnistettavia kielellisten, visuaalisten, ja sisällöllisten elementtien esiintymiskuvioita Zodiac man -piirrosta ympäröivästä tekstistä, ja toiseksi tutkia mahdollista diakronista muutosta näissä elementeissä 1500-luvun kuluessa. Toisin kuin oletettiin, kielellisissä elementeissä esiintyi hyvin minimaalisia viitteitä kansankielistymisestä: toisin sanoen lainasanastossa ei tapahtunut juurikaan määrällisiä tai diakronisia muutoksia. Visuaalisissa elementeissä on sen sijaan muutoksia havaittavissa: visuaalisten päätyyppien ja alatyypin jakaumassa tapahtui huomattavaa vaihtelua 1500-luvulla. Voidaankin sanoa, että vuosisadan loppua kohden monimutkaisemmat piirrostyylit saivat väistyä visuaalisesti yksinkertaisempien tyylien tieltä, jotka eivät esimerkiksi sisältäneet planetaarista informaatiota lainkaan. Myös sisällöllisiä elementtejä analysoitaessa voidaan katsoa almanakkojen sisällön siirtyvän yhä kauemmas pelkästään astrologisesta sisällöstä 1500-luvun loppua kohden.

Tutkimukseen liittyi kuitenkin rajoitteita: otanta on melko pieni ja almanakoista analysoitava aineisto rajoittuu vain lähinnä astrologiseen sisältöön. Kaikki aineisto on myös haettu vain yhtä tietokantaa ja valmiiksi annotoitua listaa käyttäen. Kokonaisvaltaisempaa tutkimusta ajatellen almanakkoja voisi etsiä Luborskyn ja Ingramin (1998) listan ulkopuolelta hyödyntäen useampaa tietokantaa, ja analyysin voisi suorittaa almanakan tasolla siten, että muukin sisältö otettaisiin huomioon. Myös lainasanastoa ja kieliä tutkittaessa keskityttiin vain astrologiseen sanastoon: tätäkin osa-aluetta voisi laajentaa tulevia tutkimuksia ajatellen. Käsiteltävä aikaväli (1537-1603) on myös historiallisessa kontekstissa melko lyhyt, sillä aineistoa on vain 66 vuoden ajanjaksolta.

Lopuksi

Tämän pro gradu -tutkielman tarkoituksena oli selvittää, millaisissa ympäristöissä Zodiac man -puupiiirros esiintyy varhaismodernissa Englannissa painetun almanakan sivuilla: millaisia visuaalisia, kielellisiä, ja sisällöllisiä elementtejä kuvan ympäristöstä voidaan tunnistaa ja millaisia muutoksia niissä tapahtuu tarkasteltavan ajanjakson (1537-1603) aikana. 1500-luku oli kirjapainon kulta-ajan alkua: massatuotannon ja kopioinnin helpottumisen myötä tekstejä oli mahdollista tuottaa yhä enemmän ja nopeammin. Siksi varhaismoderni aikakausi ja varsinkin 1500-luku valikoitui tähän tutkimukseen. Painetun materiaalin määrän ja laadun

perusteella voidaan mahdollisesti tarkastella kansankielistymistä ja kielen standardisoitumisen etenemistä. Tähän tutkimukseen kerättiin 48 almanakkaa Early English Books Online - tietokannasta Luborskyn ja Ingramin (1998) kirjan *A guide to English illustrated books, 1536-1603* avulla. Kirjassa Zodiac man -piirroksille on annettu visuaaliset kategoriat: niitä hyödynnettiin ja niiden toimivuutta analysoitiin tässä tutkimuksessa Zodiac manin visuaalisessa analyysissä. Sen lisäksi astrologiaan ja horoskooppeihin liittyvää sanastoa analysoitiin päättelämällä niiden alkuperä Oxford English Dictionaryn avulla. Almanakoille annettiin myös tekstityypeittäin ja teemoittain tekstitunnisteita sisällön luokittelua varten.

Tutkimuksen tavoitteena oli tutkia eri elementtien (kielelliset, visuaaliset, sisällölliset) mahdollisia esiintymiskaavoja ja diakronisia muutoksia niissä 1500-luvun aikana. Kielellisissä elementeissä muutos oli minimaalinen, jopa lähes olematon. Visuaaliset ja sisällölliset elementit kuitenkin osoittavat, että 1500-luvun loppua kohden almanakoissa alettiin suosia Zodiac man- kuvissa visuaalisesti yksinkertaisempaa ilmettä ja teemallisesti monipuolisempaa sekä vähemmän astrologista sisältöä. Tulokset myös osoittavat verbaalisten ja visuaalisten elementtien välisen olemassaolon: Zodiac man -puupiiroksen esiintymiskonteksti määrittää sen ympärillä käsiteltäviä teemoja jossain määrin.

Varhaismoderni painettu almanakka on loistava tutkimuskohde verbaalisten ja visuaalisten elementtien ja niiden kehityksen tutkimukselle, sillä julkaisutyyppi oli laajalle levinnyt ja melko suosittu. Verbaalisten ja visuaalisten elementtien tutkiminen on myös tärkeää, jotta ymmärtäisimme paremmin tekstien sosiaalisia tarkoituksia ja niiden suunnittelua tietyille yleisöille paremmin. Tekstien multimodaalisuus ja kuvan ja tekstin suhteen tutkiminen on melko uusi ilmiö, ja tutkimusta voitaisiin tehdä vielä paljon enemmän tällä saralla. Tämänkaltaiset tutkimustulokset keskiaikaisista ja varhaismoderneista teksteistä indikoivat myös sitä, että jo tuolloin sanavalintojen ja visuaalisen ilmeen takana oli tarkoituksia ja ajatuksia. Tämä tekee tutkimuksen aiheesta myös historiallisesti olennaisen.