

UNIVERSITY OF WYOMING

Growth of the Second Sum

Story, Reflection, and Annotated Bibliography

J.D. Wagner

12/5/2103

Peter Vorstat sat in Anton Koberger's printing house, pressing in lines of type into trays for the newest project that the presses was taking on, the second part of a theological text by an Englishman called Alexander de Ales. Peter was on Chapter XXXV now, germinating his composing stick with the necessary letters to fill the tray that would, in turn, seed its ink into the pages when the pressmen would eventually work their parts. For now, the middle-aged man worked early in the morning to collect and assemble the type that would be imprinted in the day to come.

Many days had come for Peter, days he had come to spend composing and imposing type inside of Koberger's shop. He was often the first to arrive in the morning, usually with six other compositors, and now that fall was setting in, he could feel cold of the November morning flowing through him. He had been with Koberger since the beginning, when the greatest printing house of Europe was still a fledgling shop, nothing compared to Schöffer's shop in Mainz. Peter was only an apprentice then, and his mentor had passed on only a couple years after Koberger's press had printed its first notable volume, a text by a Greek philosopher, in 1472.

He was a decade older, a decade more skilled, but a decade more grown into his hard-worked body. He no longer read the letters he composed into his galley tray, the device that held all of his type together to form a single page of this book, to seed his mind with understanding of the world, but only to read into his future wages. If he read this *Summa universae theologiae* copy with his money in mind, and set his type just like the written word, he had a good reading for the day. This would be easy enough for him, though, because he and his fellow compositors were provided with printed copies of de Ales' text, Venetian editions printed by Erhardt Ratdolt in 1475. Koberger, being the shrewd manager he was, secured printed copies of his future

publishing projects when it was possible, and Peter and his fellow compositors worked faster, since they could read printed text faster than manuscript.

As he ran his personal history through his mind, Peter completed his first page of text on his galley tray. The typography was set into two columns for the text body. Peter now worked to add in the headings of his page that he had just composed, to denote what section of the book he had completed. It was his sixth page of the day, and at the rate he worked, he hoped to complete around 420 formes. He wrapped a length of string around the type he set, so it would not come undone when he moved onto the next step of his work.

Since Peter had finished this page, he began on his process of imposition. The overseer of the compositors had cast off all of the pages correctly over the past week, so the process of transition between composition and imposition was an easy one. The six pages he had completed all suited the folio format of this book; the overseer had tasked Peter with completing the inner formes of the folios. He placed his pages onto the large and flat imposing stone. He set his chase, a large wooden frame used to form the forme, around the stone, and began to set his wooden blocks of furniture and small wooden wedges all around the edges of his type. He unwrapped the string that held together his blocks of type, and pushed down three protruding pieces of type in his pages. Then, he hammered down his small wedges, the quoins, between the chase and the furniture, and secured the type within the chase. He picked up the entire frame he assembled, which held two entire pages of text. And, he repeated this process of alignment and bludgeoning until all six pages were imposed.

He stared down at his six pages of work, and let out a sigh of resignation. It was still early. Peter could tell by the frost on the windows of the printing house. He looked around and

saw the pressmen walking into the press room, probably beginning their work making proof pages. He picked up his formes and lugged them into the press room. He made eye contact with two of the pressmen, one a journeyman and the other his apprentice, and nodded his head toward the two proof-presses Koberger owned. They stopped preparing the other presses for the rest of the day's printing, and attended to Peter Vorstadt for the moment.

"I just need proofs of these for Hans and Bernhardt," Peter said.

"Alright," the journeyman said. He and his apprentice took to preparing the proof-press, and Peter left the press room back to the composing room. He resumed his process of typesetting and imposing what would eventually be the *Summa universae theologiae*. It was all process to him, a process that carried through every season and time. A couple hours later, for a moment, he looked up from his work to see if last night's frost had left the windows of the chilly printing house. The sun had melted the frost away, and the pressman's apprentice hurried out of the pressroom to deliver the first proofs of the book Hans and Bernhardt.

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It was midday now. Hans, the reader, and Bernhardt, the corrector, had been reading their way through various texts that had been composed and proof-printed during the morning. The apprentices who were present this morning had been bringing them a steady progress of pages that needed to be proofed. Hans cleared his eye-length blonde hair from his eyes and recited the copy text to Bernhardt. The words just spilled out of Hans' mouth, much like they spilled into Peter Vorstadt's mind, for the purpose of pay. Bernhardt read along Peter's first proof with the same purpose. The ink was slightly runny because the paper was still damp, since the ink would not set on dry paper, and it smeared a bit on Bernhardt's right hand as he marked Peter Vorstadt's

mistakes with a quill. As Hans read from his Venetian manuscript, Bernhardt's quill switched between ink pot and proof, noting turned letters with checkmarks, scratching little carets above the space where missed words belonged, and struck out misplaced words and letters. Soon, Vorstadt's proof-pages were finished.

"Peter, come and get your proofs," Hans shouted to Peter. Peter sat on the other side of the room, continuing his process of composing and imposing. He stood, walked over to the reader-corrector pair, and retrieved his first proofs in silence. He returned to his table and his type cases to continue his work, now revising his mistakes instead of assembling new formes. Every page he didn't impose and get to the press was a guldiner he didn't get paid.

As Hans and Bernhardt progressed through their reading and correcting, the other workers in Koberger's printing shop streamed back and forth, collecting their proofs so that the true press run could happen. Three other pairs of readers and correctors were also present today, since it was intended by Koberger to produce at least 15 copies today. The copies of the *Summa universae theologiae pars secunda* that were being printed today would come from many of Koberger's presses. He had six compositors and four reader-compositor pairs producing formes and correcting the formes of the *Summa*, and also of three other scientific treatises. He was running 17 of the 24 presses in his shop during this work day, and he had 42 of his pressman in the shop today.

For these nameless men, the day burned by. The printing house was warmed by the sun at this point in the day, but their work warmed them thoroughly. Their transitions between formes and proofs on the baroque machinery of the wooden presses had made their blood flow this

morning, and it made their blood flow every morning. The process was automatic for them, because it was their life.

Peter Vorstat's formes were now corrected after three proofs, and were ready for the final printing. The pressmen did not pay attention to whom had made the formes at this point in their work day. With the final proofs ready, the pressmen worked to produce an ideal quota of sheets by the hour.

The *Summa* cycled through the pressmen's process. The compositor's formes containing the theological treatise went through the same process as every text did as it was being "make-ready". It was rapid. One pressman set the formes in the coffin on top of a press stone and inked the type with a leather-and-sheepskin ball. He did this by gathering ink on the sheepskin and spreading it on the type in a rocking motion.

Meanwhile, his counterpart was preparing the paper on the tympan and frisket. First, he made register, a process that aligned the points of the press to allow for the perfection of the paper. He grabbed a piece of damp paper from the bench next to the press and placed it into the tympan, the frame that held the paper on top of the forme, and placed it on the press points. He quickly prepared a guide-paper, called the tympan sheet, for aligning printing paper. He prepared the wool and parchment for the tympan, so that the wooden platen pressed the letters of the forme evenly onto the paper.

Now, they slid more paper from the press into the tympan and frisket, and the true printing of the *Summa* from this press began, and so began part of the *Summa universae theologiae pars secunda* from this press. The frame was aligned over the forme, and one of the workmen began to crank his rounce, his wooden windlass, toward his body, pushing down the

platen onto the paper, and thus imposing the ink onto the paper. He inhaled, as to regain strength for his next turn. When he released the pull, the second half of the forme went under the platen and he pulled the rounce toward himself with his heaving arms, imprinting the second segment of the paper with second part of the forme.

After this, with no time to breathe, the men released the paper from the tympan and frisket, and replaced the forme they had been using to perfect their sheet of the *Summa*. Their perfection was turning the imprinted paper over end-to-end so that the other side could be printed on. They did this with haste and practicality to print what they could in an hour. Some of the unskilled workboys hurried through the press room to gather the finished pages of the book and brought them into a drying room. They hung up the damp, inky pages to dry in repetition, over and over. The day wore out into night as this continued on, until everyone had left and only the pages of soon-to-be books hung in the drying room.



Days later, a copy of the unbound *Summa Universae Theologiae pars secunda* sat in front of Anton Koberger himself. The dried pages had been collected, placed in order, and arranged into what would soon become a bound book. Anton was bringing himself back decades with this book as he leafed past the pages containing the register to the text body. He had dreamed about what he must do with this book nights, even a fortnight, before it came off of the press. He closed his eyes to recall the dream.

He stood in front of the large green letter “C”. It was strangely substantial, and he walked closer to see its substance. He extended his arm covered in vines and starlight to touch the letter and understand its constitution. But it was elusive, fading away as his fingers grew closer to its

substance. The vines of his arm touched the green, rubricated letter, but he could not physically grasp it. Anton looked around himself to understand the space he occupied with the letter, the first unit of the first word written by Alexander de Ales in his second volume explaining the sum of the theology of the universe. The sum of this was in front of him, he felt. The space around him was tan, a light brown like the paper he bought from the mill outside of town. The space felt soft and supple like the paper, the air he occupied humid like the steam from a papermaker's vat. Steam materialized from the paper-space, plumes extending all along the letter, which now seemed to generate its own heat. The smell of rotten linen pulp filled the paper-space, and Anton was overwhelmed by the steam. He stumbled about, blinded, and felt the vines and starlight fall away from his arms. A black sky of rumbling storm clouds buzzed above him. The letter was still present, extending up and above the clouds. Rain came from the clouds. It was a rain of seeds and droplets of his perfect recipe of ink. The ground puddled black with his ink, and plants looking like rubricated letters of purple, blue and red springing up from the earth. Anton was overwhelmed by the ink, the depths of inky blackness.

And it all disappeared. As if he had opened his eyes within the realm of his closed eyes, a brilliant horizon of gold stood against the green letter, which stood like a tree of creation immemorial. Anton said praises to God for his deliverance from the ink, and into the golden horizon and the tree-letter. Anton focused his mind on the horizon, bending it like he would have diapered gold leaf years and years ago with his fine hand-tools. The creases defined themselves in the horizon, showing the end of the voluminous and aureate expanse. The gold began to melt away, leaving a portal of tan paper-space, and a tall, thin monk stepped through.

"Let the Highest Good shine through all time," the monk said.



Anton opened his eyes, and imagined gilding this mystical letter of this copy of Alexander de Ales second volume of universal theology. He was proud of his workmen, the process of their labor that made this single book of the many books he had produced. He knew that within this apparently humble book, its own sea of ink and space of paper, there would be a memorial to the glory of God and to the memory of Alexander de Ales. Their work was a shrine of ideas, and he would give alms to their holiest of works.



This *Summa universae theologiae pars secunda* traded hands and processes at an incredible pace from this point in its existence, almost as if it were a tenacious chamomile eager to bloom, be harvested, and soothe the soul of its harvester. Most of the other copies that were printed would remain unbound in Koberger's bookstores until purchase, sprouts without blooms.

Koberger commissioned the binding of a complete set of the *Summa* as a showpiece, the best of his crop of printings of de Ales' writing, the dream bound into folio. A special sibling of the *Pars secunda*, *Pars prima*, was sent to a Dominican convent, the Katharinenkloster, to be bound and rubricated a fortnight ago, and it was time for this *Pars secunda*. Koberger had dealt with this convent for binding and rubrication before, notably with a copy of Hieronymus's *Vitae sanctorum patrum*. The women of the convent astonished Koberger because they could enact a manly art like bookbinding with such efficacy. The women worked pigskin expertly, which is what Koberger wanted to cover what would eventually be the complete collection of the *Summa*. Koberger had sent the *Pars secunda* to their community a week after all of the printing for the text had concluded. When the *Pars secunda* was returned to Koberger, he was thrilled by the binding, like he had been with *Pars prima*. The pigskin was taut around the wood planks of the

front and back cover. Koberger felt the blind-tooled lines the nuns had embellished the cover with so innately. The bronzes clasps held the covers together firmly, and the iron centerpieces and cornerpieces gleamed coldly and brilliantly, even in the candlelight of his office.

His return of the *Pars secunda* to the convent happened soon after the binding, trading hands again for its illumination and rubrication. He now entrusted the book to Barbara Gewichtmacherin, the sole illuminator of the convent. Koberger recognized her work as being of the top quality. Being a goldsmith himself, he told her about the design he desired on the first page of the text body. The *Pars secunda* traded hands another time, in the courtyard of the Katharinenkloster, and Koberger walked away as the November snow heralded the start of winter.

Anton sat in his cold, candlelit office in his printing house. He opened his special copy of the *Summa universae theologiae pars secunda* to the first page of the text body. A square of gold leaf expanded across the rubricated initial, and it glimmered with the candlelight. Anton inhaled, held his breath and returned to his morphic, golden horizon. His thumbs fluttered through the pages, and he marveled at the sparkling purple, green, blue, and red rubrication the Sisters of St. Katherine had created. He returned to that page of the golden horizon, and reflected on this book, this monument. He considered how he had grown since his first published work, to where he could now embellish his work with gold leaf and purple ink. The word "Completis" escaped his lips, and he slowly closed the folio, returning the golden horizon into the space of ink and paper.

J.D. Wagner

### Works Cited, with Brief Annotations

Clement, Richard W. "Medieval and Renaissance Book Production: Printed Books." *The ORB Online Encyclopedia: Books and Universities*. The College of Staten Island, CUNY, 2003. Web. 24 October, 2013. <http://www.the-orb.net/encyclp/culture/books/medbook2.html>

This website provided a concise summary of the book-making process. When the Gaskell text became too dense and difficult to comprehend, I turned to this website because it provided a condensed version of the process Gaskell described in his book. This is because the Gaskell text I use was the significant source for this internet encyclopedia entry.

de Ales, Alexander. *Summa univerae theologia, pars secunda*. Nuremburg: Anton Korberger, 1481. Text.

This book requires little explanation. It is the basis of the entire sum of work for this project. Without this book, there would be no project.

Fussel, Stephen. *Gutenberg and the impact of printing*. Burlington: Ashgate, 2005. 59- 65. Print.

I connected the information from this book with the Catholic Encyclopedia entry regarding when de Ales' *Summa universae theologiae* publishing in Venice. Erhardt Ratdolt was operating his press at the same time as Koberger, and Ratdolt lived in Venice. While saying Ratdolt published the first Venetian edition of the *Summa* takes liberties, they are liberties founded in factuality. The German-Venetian connection was significant at this time, and it makes sense that major printers like Koberger and Ratdolt would have some personal connection.

Gaskell, Philip. *A New Introduction to Bibliography*. New York: Oxford University Press, 1972. 1- 160. Print.

This was my primary book and resource for describing the bibliographic process. I am indebted to Gaskell's detailed writing about the early printing process. Almost any description of printing in this story is based on Gaskell's account. However, his descriptions centered on English printing after 1500, and this created some problems in my writing. I discuss this more in my reflection write-up.

"Guldiner." *Money Museum*. Money Museum, n.d. Web. 5 Dec 2013.

<<http://www.moneymuseum.com/moneymuseum/library/pictures/image.jsp?lang=en&ix=18&i=18>>.

This source was used only to find an accurate currency for late-15<sup>th</sup> century Nuremberg, which was the guldiner.

"Illumination Gilding." *The Illuminated Page*. www.IlluminatedPage.com, n.d. Web. 5 Dec 2013. <<http://www.illuminatedpage.com/gilding.html>>.

I used this source to understand the process of illumination at this time. Even though I did not detail too much about illumination, I wanted to understand the process for the purpose of the narrative.

Lane, Anne Marie. "Toppan Selection: Alexander de Hales, Summa universae theologiae." *American Heritage Center (AHC) News*. WordPress, 18 Feb 2011. Web. 5 Dec 2013. <<http://americanheritagecenter.wordpress.com/2011/02/18/toppan-selection-alexander-de-hales-summa-universae-theologiae-pars-seconda/>>.

This blog post was a good source to have access to images of the *Summa*, and descriptions I might have forgotten about the text. For instance, I thought the letter on the illuminated square was an "S", not a "C".

Moran, James. *Printing Presses: History and Development from the Fifteenth Century to Modern Times*. Berkeley: University of California Press, 1978. Print.

This book gave me reference to the bibliographic process before 1500. While it was not as comprehensive or categorical in its definition of bibliographic tasks, it gave me some reference to pre-1500 book-making. The most useful information this provided was about the tympan and frisket, which is that there is no clear date of its invention. One of the first documented uses of it was in 1487, according to Moran, which was a few years after the printing of the *Summa*. I used this ambiguity to my benefit, and assumed the tympan and frisket were around at that time.

*Search Results: Keyword - Anton Koberger*. 2013. Photographs. The British Library Database of Bookbindings, London. Web. 5 Dec 2013. <<http://www.bl.uk/catalogues/bookbindings/Results.aspx?SearchType=QuickSearch>>.

The British Library Database has a small collection of Koberger printings, so I looked through them to find who would have bound pigskin. I found the reference to Konrad Forster and the Dominikanerkloster on one entry with pigskin binding, and the book was published shortly before the *Summa*. This detail eventually led me to find the women of the Katharinenkloster.

"S. Katharinenkloster ." *Monastic Matrix: A scholarly resource for the study of women's religious communities from 400 to 1600 CE* . University of Iowa Department of History, n.d. Web. 5 Dec 2013. <<http://www.monasticmatrix.org/monasticon/s-katharinenkloster>>.

This resource is discussed in the "Reflection" write-up I have provided.

"The Period before Printed Books." *Johannes Gutenberg*. SUB Göttingen and Saur Publishing House. Web. 5 Dec 2013.

<<https://gutenbergdigital.de/gudi/eframes/texte/frameset/indxante.htm>>.

This page was the only reference to Konrad Forster I could find, and sadly, it does not seem to be the most credible resource. However, it was what I had to work with, so I used it. Plus, its incredibility was beneficial because it allowed for me to use the Dominican monks of St. Katherine in my story.

Turner, William. "Alexander of Hales." *The Catholic Encyclopedia*. Vol. 1. New York: Robert Appleton Company, 1907. 4 Dec. 2013 <<http://www.newadvent.org/cathen/01298a.htm>>.

This resource had two purposes in this project. The first purpose was that I used its discussion about the *Summa universae theologiae* to quote the purpose of the text in the dream sequence of the story. This is the only time I purposely discuss the text itself, and not the book. The second purpose was that I used it to find the date of earlier publishings of the *Summa*, which is what I made the Venetian connection from.

Wallau, Heinrich. "Anthony Koberger." *The Catholic Encyclopedia*. Vol. 8. New York: Robert Appleton Company, 1910. 24 Oct. 2013.

<<http://www.newadvent.org/cathen/08684b.htm>>.

This encyclopedia article on Koberger provided the most detail about his life and business. I had trouble finding any better, or English-language, writings on him. In fact, Wikipedia used this encyclopedia entry as their main source of information for their article on Koberger. Anything about Koberger or his business was derived from this article.