Marvelous Mechanical Bodies in Sixteenth-Century Joyous Entries In Antwerp and Vienna

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29 March 2014

This paper was presented at the 2014 meeting of the Renaissance Society of America in New York.

Introduction

(SLIDE 2) This is a page from the 1549 festival book published by Cornelius Grapheus commemorating the joyous entry of the then-prince Philip II into Antwerp.[1] According to this book, Philip would have encountered this colossal statue of the giant Druon Antigoon from Antwerp folk legend. Philip had already passed by a great many other triumphal displays staffed with allegorical figures celebrating the exchange of oaths between the Flemish city and their soon-to-be sovereign. Some of these decorative figures were painted on temporary arches, others sculpted from plaster, and some even vividly embodied by live men and women staged in *tableaux vivants*. Yet if Grapheus is to be believed, something remarkable happened as Philip approached this particular statue: the great colossus suddenly came to life, bowing its head to the prince in seeming-reverence.[2] Here, amidst a host of living humans acting like statues, was a sculpture that surprisingly acted like a living human!

[1] This paper was presented at the 2014 meeting of the Renaissance Society of America in New York. It is based on a spring 2013 graduate seminar led by Anthony Colantuono, whose comments were invaluable. I am thankful for the support of the Smith Fellowship as well as a travel grant from the University of Maryland College of Arts and Humanities.

[2] Grapheus and Scaliger, *La Tresadmirable, Tresmagnificque, Triumphante Entree, Du Treshault Trespuissant Prince Philipes*, 81; Bussels, *Spectacle, Rhetoric and Power*, 105–110.

This statue was hardly the first mechanical apparatus deployed during a triumphal entry in the European Renaissance, and it would not be the last. Though I only have time to offer a handful of examples today, I hope to approach this core question: Why did sixteenth-century designers find mechanical bodies an ideal way to communicate fealty to a sovereign? The answer, I will argue, is twofold. Firstly, these automata participated in a storied tradition of joyous entries with mechanical artworks fashioned by no less a figure than Leonardo da Vinci. Secondly, these mechanical bodies appealed to a decidedly courtly fascination with liminal objects. Like prized artworks that blurred the border between artistic media or between natural and artificial wonders, these automata magnified their political messages by fostering wonder and delight at their ambiguous identities.

Examples of 16th Century Automata

Druon Antigoon in Antwerp

(SLIDE 3) Philip II's 1549 joyous entry into Antwerp came several years before he would assume the throne of his father, Charles V. The spectacle framed the exchange of vows of fealty between Philip and the city of Antwerp. This peculiar tradition dated back to the original 1356 Inauguration Charter in which Antwerp pledged its faithful submission to Johanna, Duchess of Brabant. She, in turn, promised that her rule would be just and fair to the citizens of the city. From Cornelius Grapheus' surviving festival book, we see that the decorations for Philip's entry almost two centuries later echoed this dual theme. The various archways visualized Antwerp's devotion to Philip and the bounties it could offer the empire. They simultaneously invoked historical examples of honorable and just sovereigns, establishing Philip's responsibilities through past precedents. **(SLIDE 4)** For example, one arch included life-size statues of Philip's namesakes such as Philip the Fair, Philip of Macedon, Philip the Roman Emperor, and Saint Philip the Apostle. As Stijn Bussels has demonstrated in his recent analysis of the 1549 entry, the ceremony continuously invoked past precedents that endowed the present-day performance of power relations with historical force.[3]

(SLIDE 5) Druon Antigoon was no exception to this rhetorical program. His pedestal bore an inscription explaining its place in the broader symbolic program of this joyous entry. According to legend, Antigoon had been a tyrannical giant who kept guard over the Scheldt river, exacting tolls from passing ships. If a captain refused, the giant would cut off his right hand. It was said that the Roman hero Salvius Brabo appropriately vanquished the giant by severing Antigoon's own right hand. In his festival book Grapheus compared Philip to this Roman hero. This is fine praise for the young prince, but it also telegraphs his responsibilities to protect the Antwerp's liberty.

[3] Bussels, *Spectacle, Rhetoric and Power*, 11–13.

(SLIDE 6) Antwerp, of course, would later come to revolt along with the rest of the Netherlands against the emperor Philip, justifying their rebellion due to Philip's failure to live up to these responsibilities. The Low Countries eventually fostered an alliance with the French in 1580, with William the Silent offering a governorship to François, the Duke of Anjou and Alençon and brother to France's King Henri III. When François and his troops arrived in the Netherlands in 1582, the cities of Bruges, Ghent, and Antwerp all welcomed him with joyous entries.[4]

(SLIDE 7) A lavishly-illustrated festival book documents the spectacles that Pieter Loyseleur de Villiers and the polymathic Hans Vredeman de Vries planned for François. These festivities once again featured a mechanical Druon Antigoon that moved in reaction to the passing sovereign.[5] **(SLIDE 8)** But the designers of this entry had added some new functionality. Antigoon now held a standard in his left hand. As the statue nodded to François, it simultaneously lowered the Spanish flag and raised the French one, compounding the mechanical expression of fealty to Antwerp's new sovereign by performing the rejection of the old one.[6] This new version of Antigoon boldly inverted its former politics, now comparing the rejected Philip to the tyrannical giant and physically discarding Spanish colors for French.[7]

(SLIDE 9) An etching by Frans Hogenberg gives us a sense of the scene in the Grote Markt that day. If any human operators were aiding the statue in its motions, the artist has effaced their presence here. **(SLIDE 10)** Note also how Hogenberg clearly emphasizes the moment of interaction between François and the colossus, setting the mechanical body in perfect profile against the passing entourage and showing François turned to regard the statue. If the organizers sought to capture the Duke's attention, Hogenberg seems to think they succeeded.

(SLIDE 11) (As an aside, an Antigoon float with a turning head occasionally shows up in modern-day parades in Antwerp. **(SLIDE 12-13)** Since the late 19th century he has also been complemented by a fountain in the Grote Markt that wittily illustrates Silvius' Brabo's amputation of the giant.)

Vienna 1577 – Emperor Rudolf II enters Vienna

(SLIDE 14) A rather different form of automaton appeared in the joyous entry of the Holy Roman Emperor Rudolf II into Vienna on July 15th, 1577. A report written by the imperial secretary Paulus Fabritius describes the scene. Two decorated arches stood at the city gates: one at the Danube Gate on the northeastern side of the city, and one on the Bauernmarkt to the southwest on the opposite side of the river.[8] **(SLIDE 15)** In addition to a double-headed

[4] Bruaene, "Spectacle and Spin for a Spurned Prince."
[5] Villiers and Vries, *La Ioyeuse [Et] Magnifique Entrée de Monseigneur Francoys.*
[6] Ibid., 32.
[7] Bruaene, "Spectacle and Spin for a Spurned Prince," 270–271.
[8] Kaufmann, *The Mastery of Nature*, 136.

Roman eagle and a poetic inscription praising Rudolf, the painted panels on the Danube gate bore personifications of the imperial territories.[9] **(SLIDE 16)** According to Fabritius' remarkable description, the festival designers constructed the figure of Europe from superimposed, moveable panels attached to the surface of the arch. They configured these panels in such a way that Europe appeared to bend her head and knees in apparent reverence as Rudolf passed by the arch.[10] **(SLIDE 17)** On the opposite side of this arch was another articulated, multi-panel painting of Austria, dressed in red and white and carrying a lance and shield. She, too, bowed to the emperor as he passed.[11]

(SLIDE 18) Though Thomas DaCoasta Kaufmann published this account quite some time ago, to my knowledge the peculiar motion of these paintings has not drawn extended comment. Their overlap with the mechanical bodies described in the Antwerp entries intrigued me. While festival books give descriptive accounts of these moving artworks, they don't reconstruct for us the motivation for deploying such mechanical bodies. What I find most fascinating is the unique position of these mechanical bodies in relation to their surrounding political spectacles. What does it mean that these automata, in effect, performed their stillness in the context of so many other static decorations, only becoming animate in the presence of the sovereign? To understand the reception of these works, we need to plot their relationships to the literary conventions and historic legends of lifelike artworks. Did the legendary history of automata prompt the creative decisions of these spectacles' designers? How did the rhetoric of automata inform the celebrated rulers' reception of these moving artworks? How did rest of the joyous entry position and condition its celebrants to view these moving bodies?

Historic Legends of Mechanical Marvels

The history of technology is peppered with examples of automata that the learned viewers in Antwerp and Vienna may have recalled when confronted with

[9] Ibid., 140–141.

[10] On this [painted] board is superimposed a single independent board, on which Europe is represented, and which is designed so that she can bend her head and knees in a decent and civil motion with the rest of her body... (translations by author unless otherwise noted) "Huic tabulae applicata est et superposita, alia singularis et libera tabula, in qua Europa repraesentatur, ea ita conformata est, ut et caput et genua cum decenti et ciuili motu totuis corporis flectere possit, atque hac reuerentia, honorifico gestu, ter exhibito, saluauit ut excepti accedentem Inuictissimum Imperatorem Rudolphum II." Fol. 19v from the "Description of the Ceremonial Entry of Emperor Rudolf II into Vienna, 17 July 1577, and of the Ehrenpforte erected by the City of Vienna, submitted to the City Council by Dr. Paulus Fabritius, Imperial Physician and Court Mathematicus." (Niederösterreichisches Landesarchiv, Stände Archiv, A 9/26, fol. 10r-21r), published in Ibid., 215–216.

[11] On the opposite side Austria is pictured in the guise of a graceful and elegant girl, dressed in red and white, and which is set up to bow reverentially to his Imperial Majesty. "Ex altero latere picta est Austria, forma puella venustae ac lepidae, ornata veste rubra et alba, ea genibus flexis statuta est ut reuerenter Imperatoriae Maiestati honorem verecunda gestum exhibere uideatur." Ibid., 216.

mechanical giants and moving paintings. Accounts include the apocryphal and mythical, such as Hephaestus moving brass tripods, Daedalus' miraculous dancing sculptures, and Albertus Magnus' brazen talking head.[12] Crucially, several of these legendary or quasi-mythical accounts were connected to royal pageants. **(SLIDE 19)** In 1571 Petrus Ramus described, in what is certainly an apocryphal account, a mechanical fly designed by the mathematician Regiomontanus that could fly around a room of its own accord and return to its owner's hand, to the great wonder of onlookers. Ramus also mentioned a mechanical eagle that Regiomontanus constructed, which could fly out from Nuremberg to meet an approaching dignitary and escort them into the city.[13]

(SLIDE 20) Even more famed was Leonardo da Vinci's legendary lion, a creation that seems to have transcended historical constraints. As Jill Burke has remarked, once one looks into the Leonardo literature, "robotic lions start appearing everywhere."[14] Accounts of the joyous entries of Louis XII into Milan in July of 1509 and the entry of François I into Lyons in 1515 both describe a captivating performance by a Leonardo device. In both these accounts, a mechanical lion is said to marvelously move of its own accord before stopping, bowing before the monarch, and then opening its chest to present a bouquet of lilies to the monarch. Although the historicity of this early sixteenth-century marvel is uncertain, the conventional imagery was clearly enduring. Fromt he year 1600, Michelangelo Buonarotti the Younger reported that the wedding celebration of Marie de' Medici include a robotic lion done in the style of Leonardo's machine. The pairing of lion and lilies has been interpreted in as a pointed political statement on the fall of Venice (symbolized by the lion) with the arrival of the French king (symbolized by the lilies). Others find it to be a broader comment on the power of a king to subdue animalistic violence to his peaceful rule.[15] As with many Leonardo machines, there is little consensus over which extant designs may be linked to the legend of the mechanical lion. Some scholars have argued this drawing from the *Codex Atlanticus* may depict the mechanical engine for just such a programmable automaton.[16] There have also been even more imaginative reconstructions demonstrating the flower mechanism.

(SLIDE 21) Of course whether or not any of these earlier automata actually existed is, for our purposes, beyond the point. That their stories abounded, persisting even into the seventeenth century, suggests their purchase on the early modern courtly mind. And between Regiomontanus' eagle and Leonardo's lion, we find these mechanical bodies deployed for political purposes. It is likely that the moving statues and paintings of the Antwerp and Vienna entries may have reminded their learned viewers of these precedents.

[12] Bedini, "The Role of Automata in the History of Technology"; Kang, "Wonders of Mathematical Magic"; Marr, "Understanding Automata in the Late Renaissance."

[13] Hughes, *Regiomontanus*, 17; Zinner, *Regiomontanus*, 135.

[14] Burke, "Meaning and Crisis in the Early Sixteenth Century," 80.

[15] Ibid., 82.

[16] For an innovative reconstruction of the mechanical lion as a programmable automaton, see Rosheim, *Leonardo's Lost Robots*, chap. 2.

Courtly Wonders of Art and Nature

I do not want to suggest, however, that these mechanical bodies could only be read in an historical sense. We cannot ignore their visual, affective power. **(SLIDE 22)** Recall that, on their path to Antwerp's Grote Markt, both Philip and François had passed a dozen or more *tableaux vivants* in which humans imitated life-sized statues. Here we see an example from Philip's 1549 entry, with living actors fit into a proscenium stage. These *tableaux vivants* must have created an interesting effect when mixed in with the many papier mâché figures scattered along the parade route. Each new human-sized figure had the potential to be either an artificial statue, or a disguised actor who would suddenly break into motion on cue. Antigoon's colossal proportions likely magnified this surprise. Surely such a colossus could not be a human actor playing the role of a sculpture! And yet come to life it did. **(SLIDE 23)** A similar effect must have occurred in Rudolf's Vienna entry as the articulated paintings of Europe and Austria shifted into motion Spectators, including Rudolf himself, would presumably have been suspecting motion even less from a painting than from a statue. This revelatory moment must have engendered a sense of wonder in the spectator: wonder in their initial confusion over the status of the object, then wonder and admiration of the ingenious craft that created such a display. Through these devices, organizers could generate an affective response even from spectators who did not understand the subtle and layered iconography aimed at the processing monarchs and their learned retinues.[17]

(SLIDE 24) In his later treatise on metaphor and conceit, *The Telescope of Aristotle*, Emanuele Tesauro described the reaction of audiences to the mechanical marvels of Gerolamo Cardano, a Italian mathematician who is said to have constructed walking automatons in the mid-sixteenth century. Tesauro wrote that there was, "so much stupor on the part of the onlookers that they appeared to be statues; and the [moving] statues appeared to be onlookers."[18] Although composed well after the spectacles under consideration, I mention Tesauro's witty turn of phrase because it encapsulates why automata so preoccupied early modern thought. Note that he choose to convey the wonder engendered by the dancing statues through a pun on confused identities: the automata were so marvelous, their viewers so stupefied, that they appeared to swap roles. Tesauro's reversal of subject and object makes for clever rhetoric, but it also points to an encompassing interest in this period in polysemous objects. (And here I am indebted to the work of Lorrane Datson and Katherine Park.) These automata have similarly unfixed identities: between static artwork and a human *tableau vivant*; between a work of fine art and a feat of mechanical engineering; between the object of a royal gaze, and a subject that itself appears to watch the royals.

As Louis Marin has pointed out, role-switching is endemic to these kinds of the-

[17] Kaufmann, *The Mastery of Nature*, 147.

[18] Tesauro, *Il Cannocchiale Aristotelico*, 59; Hanafi, *The Monster in the Machine*, 76, 191–192.

atrical processions, with an individual subject alternately, or even simultaneously, inhabiting the role of actor and spectator at different points in the spectacle.[19] I suggest that the ambiguous nature of these mechanical bodies tapped into a vein of court culture familiar to many of us — that fascination with ambiguous or liminal objects. **(SLIDE 25)** Early modern courtly collectors developing their own *kunst-* and *wunderkammern* in the sixteenth and seventeenth centuries, such as Rudolf II, delighted in ambiguous artworks that transcended boundaries of all kind.[20] This sometimes meant artistic boundaries of medium, as in this work by Hendrick Goltzius in which he simulated the swelling and tapering lines of engraving with ink and oil paint on canvas.[21] **(SLIDE 26)** Also fascinating was the visual boundary between illusion and reality, something Joris Hoefnagel explored in this illuminated manuscript from the Rudolfine collections.[22] **(SLIDE 27)** And, of course, there was the ever-fruitful conceptual boundary between *artificialia* and *naturalia*. Collectors also prized art that imitated or played on effects of natural materials, such as this landscape done in *pietre dure* — or, as I like to think of it, a landscape made *of* the landscape.[23]

(SLIDE 28) From these examples, it seems the most exciting pieces of a Renaissance *kunstkammer* were that class of things that the sixteenth-century Florentine Vincenzo Borghini asserted, "do not belong entirely to nature or entirely to art, but rather are shared by both." Automata were considered some of the highest accomplishments of this type of artifice, because although they were creations of man, they also possessed an internal principle of motion, what Aristotle had called, "the primary mark of that which is natural".[24] And so it should not surprise us to find automatons not only in royal processions, but royal collections, too. **(SLIDE 29)** Take this clockwork centerpiece from the Vienna Kunsthistorisches museum, whose robotic crew moved and played music as the ship rolled along the banquet table, even firing its cannons.[25] **(SLIDE 30)** One listing in a seventeenth-century inventory of Rudolf's *kunstkammer* seems particularly relevant for us today. The entry describes a most peculiar landscape painting on metal that depicted a scene of peasants busily harvesting crops, their bodies apparently rocking back and forth by the action of some invisible machinery.[26] No such sixteenth-century clockwork painting survives today, but such an object may have looked like this eighteenth-century creation.[27] **(SLIDE 31)** In these, the painted scene on the recto of the metal panel has slots cut into

[19] Marin, "Notes on a Semiotic Approach to Parade, Cortege, and Procession," 223.

[20] Findlen, "Cabinets, Collecting and Natural Philosophy," 209–19; Daston and Park, *Wonders and the Order of Nature*, 280.

[21] Nichols, "The "Pen Works" of Hendrick Goltzius."

[22] Hendrix and Vignau-Wilberg, *"Mira Calligraphiae Monumenta"*.

[23] On the significance of *pietre dure*, see Koeppe, *Art of the Royal Court*, 2940, 55–70.

[24] Daston and Park, *Wonders and the Order of Nature*, 281–286.

[25] Video of this piece in action can be seen here: https://www.youtube.com/watch?list=UU4n0woAs2nZXNCTY-Dlo1hw&v=14y_7yNEnG8

[26] "Ein weiblin von metall, welches mit zwo metalline spangen all indiana musicirt und dieselben aneinander schlegt."; Bauer and Haupt, "Das Kunstkammerinventar Kaiser Rudolphs II: 1607-1611," n. 1965; Bredekamp, *The Lure of Antiquity and the Cult of the Machine*, 48.

[27] A number of extant eighteenth-century mechanical pictures now in the Conservatoire des Arts et Métiers in Paris are likely descendants of these objects; Chapuis and Droz, *Automata*,

it, through which flat painted cutouts attached in a chain can be made to move. Indeed, it seems this obscure line from the Rudolfine collections may connect back to his entry into Vienna in 1577, where genuflecting paintings on a grand scale may have inspired him to seek out an analogue for the intimate environs of his *kunstkammer*.

(SLIDE 32) And so I close hopefully a bit closer to understanding the place of these bizarre and wondrous mechanical bodies in the choreographed environment of the sixteenth-century joyous entry. By constructing these automata, the organizers certainly amplified the iconographic programs of fealty already encoded in their archways and inscriptions. But more than this, they invoked legends of other mechanical works in earlier joyous entires, further aligning their ceremonies with historic precedents. The machines in the Antwerp and Vienna entries engaged the trope of the lifelike artwork by conspicuously crossing the boundary between inert sculpture and animated being. Philip, François, and Rudolf must have admired them both for their mechanical prowess, as well as for their intriguing dual nature: at once lifelike and artificial. This nature called attention to the wondrousness of the machine's manufacture, but also to the wondrousness of very presence the animating sovereign.

chap. 7.

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