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# The rise and fall of American marionette theatre: Conservation of the Bil Baird puppet collection, 1918-1987

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**The rise and fall of American marionette theatre  
Conservation of the Bil Baird puppet collection, 1918-1987**

by

**Katharine Greder**

A thesis submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

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Program of Study Committee:  
Sara Marcketti, Major Professor  
Cheryl Farr  
John Monroe

Iowa State University  
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## ABSTRACT

One part conservation assessment and one part historical background, this thesis stems from work conducted in the summer of 2012 at MacNider Art Museum in Mason City, Iowa. Funded by the Otto Thieme Scholarship from the Costume Society of America, the research offers a morphological study of the 400 puppets in the Bil Baird puppet collection. Spanning the period from 1918 to 1987, the puppets examined offer a survey of American history throughout the 20<sup>th</sup> century, in context as well as content. The research catalogued the constituent parts of the object with suggestions for conservation. In an effort to draw parallels between 20<sup>th</sup> century puppetry and contemporary puppet conservation, this paper explores the literature regarding the history of puppetry, basic puppet kinematics, and American marionette theatre. The research seeks to underscore the assessment by offering historical background on the puppeteer, Bil Baird and provide a reference for conserving a historic puppet collection.

## CHAPTER 1

## INTRODUCTION

In the late 1950's the puppeteer Bil Baird and his wife Cora were featured on Edward R. Murrow's popular television program *Person to Person*. Cameras captured the couple inside of their Upper West Side, New York City townhome, providing insight into the elaborate inner workings of their living space and workshop. In the black and white television interview, cameras featured the couple surrounded by myriad cultural artifacts, commenting on the musical instruments collected from the couple's world travels, Interviewer, Murrow challenged Baird to play one. Looking bashful, Baird selected a circus calliope (a small, keyboard instrument) and proceeded to play with ease and competence. In jest, the camera man pointed to another, equally out-of-the-ordinary instrument and Baird once again played with similar accomplishment, while Cora, the very portrait of poise and grace watched lovingly from the couch. The cameras proceeded to the couple's workshop and stage on the lower two floors of the townhouse. Equally lithe and adept in dance, Bil and Cora demonstrated the movements of the marionettes, their life's work, from a ledge above the stage.

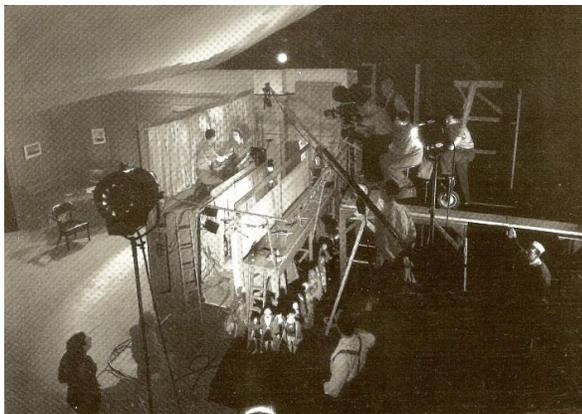


Fig. 1. Bil and Cora Baird in their studio

As the cameras pulled back to reveal the dancing marionettes and their puppeteers, the spectator watched the forms come to life in fully articulated animation. Throughout his career, Baird captured the imagination of lay people, celebrities, and critics alike. Writing in 1971, the *New York Times* theater critic Clive Barnes lamented: “Bil Baird has done the impossible. The wretched man has converted me to puppets.”<sup>1</sup> Bil Baird’s innovations in puppetry for the stage and television brought entertainment to an audience of young and old alike, shaping 20<sup>th</sup> century popular culture in the United States.

Throughout the course of his life, Baird created over 3000 marionettes which were performed for a wide array of audiences. Following his death in 1987, there was an estate sale in New York. Some of the more significant pieces, as well as the pieces that were not sold, were given to the Charles H. MacNider Art Museum in Mason City, Iowa.<sup>2</sup> Baird was a longtime supporter of the arts in Mason City, the town where he grew up in Northern Iowa. According to Peter Baird, the couple’s son, he and his sister Laura opted to “sell the Lilliputian figures because most had been sitting in boxes for years—some for decades. They are the estate—there are no oil wells” he explained, indicating that the proceeds from the sale would help pay off estate taxes.<sup>3</sup>

The auction featured a wide array of historic puppets created by Baird including representations of Martha Washington, Abraham Lincoln, Harry S. Truman, Franklin

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<sup>1</sup> Clive Barnes, "Puppet-Hater Gives Up." *New York Times*, pg. 39, December 27, 1971.

<sup>2</sup> Rita Reif, "Auction: Bil Baird's Puppets." *New York Times*, sec. C29, September 11, 1987.

Notes about the museum’s two accessions come from Dick Leet in his article on Bil Baird from *The Bil Baird World of Puppets at the Charles H. MacNider Museum. American Puppetry*. Edited by Phyllis T. Dirks Jefferson, (North Carolina: McFarland & Company, 2004). 143-154.

<sup>3</sup> *Ibid.*

Roosevelt, Leonard Bernstein, Jimmy Durante, Clark Gable, Stevie Wonder, and Marlon Brando. In addition to the hand crafted puppets, the sale included “scores of zoological specimens” from the workshop.<sup>4</sup> The auction also included some of the puppets Baird himself collected including Venetian hand puppets from the 16<sup>th</sup> century and shadow puppets from India.



Fig. 2. Clark Gable marionette, 1937.  
MacNider Art Museum, Mason City, Iowa



Fig. 3. Bird marionette from a Benny Goodman performance on the Ed Sullivan Show, 1948.  
MacNider Art Museum, Mason City, Iowa

One part conservation assessment and one part historical background, this thesis stems from work conducted in the summer of 2012 at MacNider Art Museum. Funded by the Otto Thieme Scholarship from the Costume Society of America, I carried out a conservation assessment of the Bil Baird puppet collection which includes over 400 puppets. The research catalogued the constituent parts of the object with suggestions for conservation. This thesis seeks to underscore the assessment by offering historical background about selected puppets’ creation and subsequent use. The goal of this work is to trace the rise and fall of American Marionette Theatre in the 20<sup>th</sup> century. Spanning

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<sup>4</sup> Ibid.

the period from 1918 to 1987, the puppets examined from the Baird collection can be seen as a survey of American history throughout the 20<sup>th</sup> century.

### **Definition of Terms**

**Puppet:** “A puppet is an inanimate figure that is made to move by human effort before an audience. It is the sum of these qualities that uniquely defines the puppet. Nothing else quite satisfies the definition...the player supplies the life for both of them.”<sup>5</sup>

**Conservation:** “Conservation encompasses actions taken toward the long-term preservation of cultural property. Conservation activities include examination, documentation, treatment, and preventative care, supported by research and education.”<sup>6</sup>

**Restoration:** “*Restoration* is actually a type of conservation treatment. It specifically refers to an attempt to bring cultural property closer to its original appearance. The other type of conservation treatment is *stabilization*, which refers to an attempt to maintain the integrity of cultural property and to only minimize deterioration.”<sup>7</sup>

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<sup>5</sup> Bil Baird. *The Art of the Puppet*. 13. I am opting to use Bil Baird’s definition of a puppet because it is the most comprehensive and well-defended. He spends an entire page explaining what is and is not a puppet and supplies clear and concise examples. He cites the long tradition of puppetry in ‘Jakarta, Munich, San Francisco, Shanghai, Moscow, Budapest, Sydney and Calcutta’. The crux of his definition is predicated on the object’s use as an extension of human expression.

<sup>6</sup> American Institute for the Conservation of Historic and Artistic Works, "AIC Resource Center." Last modified 2013. Accessed January 20, 2013. <http://www.conservation-us.org>. The AIC continues to set the standard in art conservation and restoration. While conservation definitions vary based on the métier, the principles stated here remain consistent with museum best practices.

<sup>7</sup> Ibid. The suggestions made in the results of this paper incorporate both restorative efforts as well as stabilization.

- Marionette: Marionettes are puppets on strings.<sup>8</sup>
- Puppet Kinematics: The basic system of mechanics that looks at motion around a given point such as a joint or fulcrum, often referred to as the geometry of motion. In this case, patterns of motion and limb analysis refer to fully-articulated puppets.
- Rod Puppet: A puppet controlled by a rod or stick.<sup>9</sup>
- Hand Puppet: Puppets manipulated by the operator's hand.<sup>10</sup>
- Shadow Puppet: A puppet used against a lighted screen which comes to life in shadow.<sup>11</sup>

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<sup>8</sup> This definition is a simple amalgamation of multiple sources. They can be two or three-dimensional and are often fully-articulated, though articulation is not a pre-condition of a marionette. On occasion Bil Baird made puppets that were abstractions-- a piece of furniture or sculpture—suspended by strings.

<sup>9</sup> This definition encompasses all styles of puppets that are manipulated by rods, whether it be one vertical rod that pierce the object at the torso, or a series of rods that control the limbs of a fully articulated puppet.

<sup>10</sup> Also referred to as a glove puppet. To increase stability and offer a wider range of manipulation, the construction techniques of hand and rod puppets are often combined.

<sup>11</sup> This definition goes a long way to over simplify the enormous detail and history of shadow puppetry discussed in greater length in this papers Review of Literature.

## CHAPTER 2

### METHODS

As part of a preliminary conservation assessment, over 400 puppets were examined, photographed, and documented in May of 2012. Broken down by accession number and description, the original assessment categorized the following conditions: 1) Surface (the acquisition of dust, grime, soot, bloom, fuming, fading, crazing, flaking, loss or addition of coating, etc); General physical (tears, breaks, scratches, warping, stiffening, stretching, etc); Structural (loose parts, insecurities, evidence of previous treatment or repair, missing parts, etc); Metal components (corrosion-active vs. stable), biological activity (insect, rodent, or fungus presence), and Storage and Display (inadequate support of structure, inappropriate materials in housing or display).

Following the analysis of these conditions, the assessment then contained: 1) an enumeration on the major areas of concern and 2) follow-up recommendations. The data included in the assessment was assembled in two parts: 1) the puppets on permanent display and 2) the puppets in permanent storage. The analysis and subsequent documentation of the puppets is organized in these two categories. This analysis was provided to MacNider for future use in conservation treatments of the Baird collection.

It is always necessary when conducting a conservation assessment to be aware of one's surroundings and where the conservation work will take place, whether outdoors or in a state-of-the art laboratory. According to Kory Berrett in the *Journal of the American Institute for the Conservation*, "To be effective, an assessment must consider the broadest issues of museum operations that affect collections preservation. The

assessor must be able to view collections care in perspective, as one museum program within the context of the whole range of institutional programs and initiatives.”<sup>12</sup> This axiom guided the recommendations proposed. In many cases the conservation of the Bil Baird collection was cost prohibitive. Measures proposed in the assessment were with respect to the resources at hand. MacNider Museum is not able to build new storage facilities, or acquire expensive Mylar casings so the puppets are visible without removing them from their boxes.

This thesis includes the conservation assessments initially made as part of the Otto Thieme Memorial Internship Program. While going through the Baird collection, I was struck by the ways in which each puppet told a story about American culture throughout the 20<sup>th</sup> century. As such, in the present study, I decided to present an in-depth analysis of one puppet from each decade, 1918 to 1987. This approach will use the social, technological, and cultural background of each decade as a framework to accent the significance of the material culture of the puppet. I also systematically searched and analyzed research articles archived in the indexed JSTOR and American History and Life related to conservation, to contextualize the assessment.

The paper is organized in five parts: An Introduction, a discussion of Methods, Research Questions and a Definition of Terms, Literature Review, Results- with a decade by decade morphology of puppets, Conclusion, and a discussion of further research. The preliminary conservation assessment is included as an appendix to this thesis.

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<sup>12</sup> Kory Berrett, "Conservation Surveys: Ethical Issues and Standards," *Journal of the American Institute for the Conservation*, 33, no. 2 (1994): 195.

### **Research Questions**

1. How does the Bil Baird puppet collection reflect social, technological, and cultural innovations occurring in the 20<sup>th</sup> century?
2. How does a marionette's composite structure impact conservation efforts?
3. Is it possible to develop a generic method of conservation for the Bil Baird puppet collection? And if so, what are the implications of this research for mixed media collections?

## CHAPTER 3

**REVIEW OF LITERATURE**

The extent to which the Bil Baird puppet collection informs us about the history of the United States in the 20<sup>th</sup> century rests on the assumption that an artifact is in and of itself, a historical event. In an essay on material culture, or the concrete things a culture leaves behind, art historian Jules David Prown wrote “Artifacts constitute the only class of historical events that occurred in the past but survive into the present...they are authentic, primary historical material available for first-hand study.”<sup>13</sup> Historians have used material culture such as clothing and tools to inform us about past societies’ belief structures and economic framework. In the case of functional objects-- as opposed to a painting or sculpture-- puppets are kinetic objects constructed for use in performance. Due to the purpose of this thesis, to draw parallels between 20<sup>th</sup> century American puppetry and contemporary puppet conservation, this chapter explores the literature regarding the history of puppetry, basic puppet kinematics, and American marionette theatre, specifically the work of Bil Baird.

Some of the earliest references to puppets in performance date back to the writings of Herodotus.<sup>14</sup> Puppets have been used throughout the world to entertain, edify, and enlighten audiences, making it difficult to distill the history of puppetry into one narrative thread. With the advent of computer generated images and stop motion

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<sup>13</sup> Jules David Prown, "The Truth of Material Culture: History or Fiction?," *American Artifacts: Essays in Material Culture*, ed. Jules David Prown and Kenneth Haltman (East Lansing, MI: Michigan State University Press, 2000).

Essay originally published in an anthology titled *History From Things: Essays on Material Culture* edited by Steven Lubar and W. David Kingery; David Prown, “The Truth of Material Culture: History or Fiction?” published by the Smithsonian Institution Press, Washington D.C., Copyright 1993.

<sup>14</sup> Bil Baird. *The Art of the Puppet*. 35.

animation, puppetry has made dramatic turns in the latter part of the 20<sup>th</sup> century. With puppets no longer ubiquitous on stage or in television, collections of marionettes and rod puppets now reside in archival storage. Where they fit in reference to fine art, folk, or history museums is a subject of debate, at the outset of which it is essential to understand the history and context in which they were made.

Peter Gay's book *Art and Act* suggests that works of art can be historically analyzed as an expression of three different factors: the artists craft and knowledge of form, the structures of the society in which the work was made, and the personality of the artist.<sup>15</sup> While this framework is useful in interpreting the objects in the Baird collection, it is important to note that Gay developed this idea with reference to 'high art', namely the work of Manet, Gropius, and Mondrian. Baird himself objected to puppetry as a form of 'high art'. According to Baird in a 1966 interview in the *New York Times*, "I don't see any division between commercialism and pure art in the theater".<sup>16</sup> Like many other fine artists throughout the mid-20<sup>th</sup> century, Baird's earliest paychecks came from commercial work, which enabled him to "gradually expand his artistic horizon."<sup>17</sup> Baird created the puppets to entertain people and make a living. While he did not claim to be a fine artist, references to his work indicate the craft was a much more personal endeavor than he discussed in newspaper interviews. The importance of society and culture in this three-tiered framework provide a lens on the

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<sup>15</sup> Peter Gay, *Art and Act*, (New York: Harper & Rowe, 1976), Preface, xi. The book originated as a series of seven lectures delivered at Cooper Union, March-April 1974.

<sup>16</sup> Walter Carlson, "Advertising: Puppeteer With a Message." *New York Times*, pg. 125, August 07, 1966.

<sup>17</sup> *Ibid.*

evolution of puppetry within the United States, one that will guide the analysis in the results of this paper.

Long before television, puppet theatre was a means of reaching a large audience. From 13<sup>th</sup> century Mesopotamia to modern robotics, puppets have played an integral role in entertainment and public discourse. Baird himself said that “puppetry seems always to have had its genesis in religious ceremony, as an adjunct to priestly power.”<sup>18</sup> According to John Bell, a scholar, puppet theorist, and fellow at Massachusetts Institute of Technology’s Center for Advanced Visual Studies, “to understand puppetry is to understand the nature of the material world in performance; and the second that the material world in performance is the dominant means by which we now communicate.”<sup>19</sup> According to Bell, the stage or screen continues to exemplify the ways in which a society interacts and exchanges information.

### **History of Puppetry**

Dating to India and China in 200 B.C., shadow puppetry was one of the earliest forms of puppet theatre on record. Scenes are depicted in shadow and projected on a white wall or screen.<sup>20</sup> The puppets are often intricately hand-carved out of leather or parchment and fully-articulated by small wooden or metal rods, or slivers of tortoise shell and animal bone. The puppets are two-dimensional and despite their use in shadow, can be elaborately painted with metallic paint. In India shadow puppets were typically three-dimensional, brightly colored objects. Indian puppetry, which finds its origins in

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<sup>18</sup> Ibid. 37.

<sup>19</sup> John Bell. *American Puppet Modernism*. (New York: Palgrave MacMillan, 2008). 2.

<sup>20</sup> Bil Baird. *The Art of the Puppet*. 56.

Rajasthan and lays claim to being the “cradle of string puppetry” is “regarded as an allegorical symbol of the spiritual sources of power and inspiration underpinning the control of society.”<sup>21</sup> Evidence shows that Chinese shadow puppetry traces its origins to the Chinese Opera of the Han Dynasty (206 B.C.-220 A.D.)<sup>22</sup>

Shadow puppetry is still performed today and different regions in Asia have distinct shadow puppet traditions. Indonesian *wayang* describes the traditional performance scored to gamelan or percussion music. A puppet from Java or Bali can easily be four to five feet tall. Vietnamese water puppetry dates back to the Sung dynasty (960-1126) C.E. and continues to be an active part of contemporary puppetry in Vietnam.<sup>23</sup>

Turkey, Greece, and Italy also had thriving puppetry traditions. During the Ottoman Empire Turkish puppeteers developed elaborate puppet plays, one for each day of Ramadan, featuring the character Karaghioz, a rogue adventurer.<sup>24</sup> The character of Karaghioz was popular all throughout the Ottoman Empire, spreading to North Africa and even parts of Italy.<sup>25</sup> The Commedia dell’arte in Italy in the 1600’s popularized the art form which eventually made its way through the Alps to Northern Europe and England.

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<sup>21</sup> Poh Sim, Plowright, "The Descralization of Puppetry: A Case History from Rajasthan." 273-274.

<sup>22</sup> Lisa Kronthal, "Conservation of Chinese Shadow Figures: Investigations into Their Manufacture, Storage, and Treatment," *Journal of the American Institute for the Conservation*. 40. no. 1 (2001): 5.

<sup>23</sup> Kathy Foley, "The Metonymy of Art: Vietnamese Water Puppetry as a Representation of Modern Vietnam," *The Drama Review, MIT Press*, 45, no. 4 (2001), 131.

<sup>24</sup> Bil Baird. *The Art of the Puppet*. 78-79

<sup>25</sup> Ibid.

### European Marionette Theatre

Much attributed to the Romantic Movement in music and literature, Goethe's *enconiums* on folk poetry and folk life sparked a revival of puppetry in Germany. At the turn of the 19<sup>th</sup> century a wave of folk theatres featuring puppetry sprang up throughout the country.<sup>26</sup> Over 100-years later, puppetry continued to thrive and one of the most notable companies in Germany was located in Munich. Founded by Paul Brann in the early 1900's, the Theatre of Munich Arts operated from 1906 until 1930 and featured the work of playwrights Arthur Schnitzler and Hans Thoma, the sculptor Olaf Gulbransen, the painters Paul Klee and Wassily Kandinsky, and designer Lucien Bernard.<sup>27</sup> Brann, the son of a Silesian farmer who studied stage production was forced to close the theatre and move to England when Hitler came to power. While Brann's Jewish ancestry necessitated the move, other marionette theatres continued to persevere in Eastern Europe including one run by Ivo Puhonny, a Czech puppeteer.

During the 1930's, the Czech Republic was home to Europe's most thriving amateur puppet theatre companies. According to Baird, during the Nazi occupation of the former Czechoslovakia, the Czech puppeteers "organized daring, illegal performances, sometimes in homes, sometimes in basements. These shows came to be known as 'Daisies', offering tongue-in-cheek satire as well as underground news

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<sup>26</sup> Paul McPharlin *Puppet Theatre in America: A History*. New York: Harper and Brothers Publishers, 1949. 321.

<sup>27</sup> Vasilii Kandinski. *The Life of Vasilii Kandinsky in Russian Art: A Study of "On the Spiritual Art"*. Newtonville, Massachusetts: Oriental Research Partners, 1980.

Kandinsky was concurrently working on his book *On the Spiritual Art* which was published in 1911. The book explores color theory and synesthesia, much like the dramatic performances he composed at the time. Referred to as 'color tone dramas' Kandinsky's work examined the relationship between color and sound and used The Theatre of Munich Artists as a forum for some of his earliest incarnations, all of which predated Bauhaus.

updates.<sup>28</sup> Unlike human performers, marionettes were able to endure grave circumstances, assume blame, make an irreverent joke, or speak candidly of Fascist regimes.

Fin de siècle France was also home to an abundance of traveling puppet troupes and local companies. Many of the well-known writers of the time became interested in puppetry and publicized the amateur performances in their plays, books, and contributions to the popular press of the time. Maurice Sand, son of George Sand and student of Delacroix, was one such amateur whose fascination with puppetry lead him to start the famed Théâtre des Amis. The theatre was home to many amateur performances where Maurice Sand made ‘portrait puppets’ depicting friends and celebrities from his Parisian milieu. In his 1949 book, McPharlin stated, Sand “wrote plays in parody of the latest hits and peppered them with topical allusions.”<sup>29</sup> Some of Maurice Sands earliest puppets were carved from firewood and their costumes fashioned with old rags, much like the earliest puppets from Baird’s collection.

Due to the political upheaval at the turn of the 20<sup>th</sup> century and the subsequent rise of immigration to the United States, puppetry became a widely recognized form of entertainment on American shores, constituting what Bil Baird would later term ‘the surge.’<sup>30</sup> By ‘the surge’ Baird referred to a renaissance in puppetry that corresponded with the dramatically changing American landscape that housed so many notable artists who fled Europe prior to World War I. Largely reputed as the father of contemporary

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<sup>28</sup> Bil Baird. *The Art of the Puppet*. 171.

<sup>29</sup> Paul McPharlin, *Puppet Theatre in America: A History*. New York: Harper and Brothers Publishers, 1949. 321.

<sup>30</sup> *Ibid.*, 154

American marionette theatre, Tony Sarg was instrumental in bridging the gap between the European and American stage. He would become an influential puppeteer, illustrator, and cartoonist who had a dramatic impact on Bil Baird's early career.

### **Tony Sarg**

Born in Guatemala of German ancestry in 1880, Tony Sarg was educated in England and eventually moved to the United States in 1915.<sup>31</sup> Sarg made his living illustrating for publications such as the *Saturday Evening Post* and the *New Yorker*, but his love of comics combined with his extensive toy collection lead him to marionette-making.<sup>32</sup> Sarg created a studio in which puppet shows from London as well as the Munich Artists' Marionette Theatre were staged.<sup>33</sup>



Fig. 4. Big Boxer marionette made by Tony Sarg, 1931.  
MacNider Art Museum, Mason City, Iowa

<sup>31</sup> Lowell Swortzell. *A Short View of American Puppetry. American Puppetry*. Edited by Phyllis T. Dirks Jefferson, North Carolina: McFarland & Company, 2004. 26.

<sup>32</sup> Tony Sarg and F.J. McIsaac. *The Tony Sarg Marionette Book*. 3.

Sarg got his start in London where he rented a studio in a building believed to have been the “Old Curiosity Shop” from the Charles Dickens novels.<sup>32</sup> For £80 a month Sarg rented the top two floors of the shop along with an elderly man who sold antiques in the basement. Sarg fixed up the building which had two old winding staircases and opened the building to tourists wanting to visit ‘Little Nell’s Bedchamber’.

<sup>33</sup> Paul McPharlin. *Puppet Theatre in America: A History*. 334.

Many of the era's most influential puppeteers apprenticed in Sarg's Greenwich Village studio; Bil Baird began his career with the troupe in 1928, as did a number of his notable contemporaries such as Lilian Owen Thompson, Sue Hastings, Rufus and Margo Rose, and Hazel Rollins.<sup>34</sup>

### **Bil Baird**

As a child, Bil Baird moved with his family from Nebraska to northern Iowa. Baird's father worked at the local Crystal Sugar factory, which made granulated sugar from the beets growing in the region. Baird made his first puppets when he was twelve years old with the help of his grandmother, who taught him to sew.



Fig. 5. Bil Baird's first handmade puppets, 1918.  
MacNider Art Museum, Mason City, Iowa

His earliest puppets were highly detailed, foreshadowing the intricate costumes and woodworking that would characterize his later work. While Baird was in high school, Tony Sarg and his touring puppet performance of *Rip Van Winkle* visited Iowa and it was a turning point in Baird's life.<sup>35</sup> Prior to the invention of the television, it was

<sup>34</sup> John Bell. *American Puppet Modernism*. 50.

<sup>35</sup> Richard Leet, "The Bil Baird World of Puppets at the Charles H. MacNider Museum". *American Puppetry*. (Edited by Phyllis T. Dirks Jefferson, North Carolina: McFarland & Company, 2004.)

common for puppet troupes to travel throughout the country to perform the latest show. At a young age Baird devoted himself to puppetry and according to Dick Leet, the Director and Curator of MacNider Museum from 1965-2002, Baird erected a stage in the family home and repurposed an old automobile dashboard for use as a lighting switchboard. From this early stage, Baird offered performances of *Treasure Island*.<sup>36</sup> He later went on to study at the University of Iowa and the Chicago Academy of Fine Arts before spending a year in Paris where, according to Baird, he “spent the better part of twelve months sketching in the afternoons and playing accordion in the cafes of Paris at night.”<sup>37</sup> Upon his return to the United States, Baird moved to New York and began working as an apprentice for Tony Sarg. Baird remained with Sarg’s company from 1928 to 1935, where he worked under Sarg’s tutelage and helped devise some of the earliest large-scale puppets now commonly used in parades. Baird eventually left the troupe in 1935 to form his own theatre.

### **Bil and Cora Baird**

In 1938, three years after starting out on his own, Baird met Cora Eisenberg during a production of Christopher Marlowe’s *Dr. Faustus*, directed by Orson Welles. Baird made the puppets for the production and Cora was a dancer playing the voices of Envy, Gluttony, and Sloth. The couple married soon after their first meeting and worked together in what would later become Bil and Cora Baird’s Marionette Theatre.<sup>38</sup> Cora gave up her career in acting to work with her husband making puppets. According to

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<sup>36</sup> Ibid., 145.

<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

Cora as quoted in her *New York Times* obituary, “My own backyard became a lot more interesting than traipsing the streets for eleven months to get two weeks work.”<sup>39</sup>

Marriage alone did not forge the working partnership; Cora had to undergo a period of earnest apprenticeship. Cora stated “he wouldn’t let me touch the puppets until I practiced and practiced until my back felt broken.”<sup>40</sup> Ultimately Cora qualified to be a partner in the company, where she helped design the puppets as well as operate them for the stage.

In addition to raising two children, Bil and Cora picked up night-club work throughout the city, making puppets for evening variety shows and neighborhood venues. They were the first people to begin segueing puppets into the thriving film industry of the 1950’s and their work was instrumental in visually translating some of the great news stories of the time into the moving image. In one such example, the Baird’s were sought after by the Columbia Broadcasting System, the American Broadcasting System, as well as the National Broadcasting System. The networks were having difficulty translating the weightlessness of space flight to their American viewers. For the occasion, Baird hand-painted “one-quarter-scale and one-eighth-scale models of the Gemini capsules”.<sup>41</sup> Figure 6 features a similar rendering for the Apollo 11 moon landing. Simulations using marionettes became commonplace on American television networks as the nation came to grips with some of the staggering technological and political milestones of the 1950’s and 60’s.

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<sup>39</sup> "Cora Baird Dead; Puppeteer was 54." *New York Times*, pg. 52, December 7, 1967.

<sup>40</sup> Ibid.

<sup>41</sup> Walter Carlson, "Advertising: Puppeteer With a Message." *New York Times*, pg. 125, August 07, 1966.



Fig. 6. Astronaut marionette from 1971 moon walk simulation.  
MacNider Art Museum, Mason City, Iowa

On multiple occasions, the State Department dispatched the Bairds to make foreign tours with their puppets. The Bairds toured Afghanistan, Nepal, India, a sweeping tour of Russia starting in Kiev and ending in Leningrad.<sup>42</sup> In many cases they were commissioned to provide public service announcements by state-run as well as non-profit organizations. Figures 7 and 8 were part of a public service announcement, which espoused the benefits of drinking milk and getting enough iron in the diet.



Fig. 7. Milk carton, 1948  
MacNider Art Museum, Mason City, Iowa



Fig. 8. Iron (the vitamin), 1948  
MacNider Art Museum, Mason City, Iowa

<sup>42</sup> Eugene Archer, "Baird Puppets Will Tour Soviet." *New York Times*, pg. 33, May 21, 1963.

In a statement about the role of satire, Baird said “audiences will accept things from a wooden figure that they wouldn’t like a human actor to say.”<sup>43</sup> The Bairds’ puppets were used to promote literacy in India and birth control in North Africa. In one tour, the couple wrote a script for a small play titled “Small Family-Happy Family” which contrasted three families, one with two children, one with three children, and one with seven.<sup>44</sup> The intent of the performance was to open a discussion about family planning in remote rural communities. Similar performances were staged in ad-campaigns across the United States which urged Americans to drink more milk or be polite on party-lines. On Christmas Eve 1965, Bil and Cora opened a playhouse out of their home on Barrow Street in Manhattan. The couple continued to work in tandem until Cora’s untimely death due to illness at the age of fifty-four in 1967.

In addition to his public service campaigns, Baird used music and literature in his performances to educate and entertain audiences. A *New York Times* article recounted an interaction between Bil Baird and Ed Sullivan in the 1950’s in which Baird was commissioned to make puppets to accompany a poem written by Ogden Nash called “Carnival of Animals.” Sullivan and the producers feared it would be “a little dull” without something moving on stage so they commissioned Baird to make several pieces for the show. According to Baird, “I said fine. And of course you intend to use Saint-Saëns’s music...? “What music?” asked Sullivan.” As the story goes, Sullivan wasn’t familiar with the Saint Saëns piece so Baird “took his musical director aside and said

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<sup>43</sup> Newton N. Minow, and Craig L. LaMay, *Abandoned in the Wasteland*, 187.

<sup>44</sup> Sam Zolotow, "Bil Baird Puppets to Push the Pill." *New York Times*, pg.28, October 26, 1968.

‘Hey, somebody better fix this guy up about classical music!’<sup>45</sup> An avid musician himself, Baird often incorporated literature and world music into his performances. He is perhaps most renowned for creating the marionettes for the Lonely Goatherd performance in the 1965 movie *The Sound of Music*.

Baird was an early pioneer in the use of modern materials in puppetry.<sup>46</sup> While his earliest works ushered in the rise of American Marionette Theatre, his later handing of the baton to Jim Henson—Baird’s protégé and founder of The Muppets-- signified large changes for the industry. Nearing the end of his career in the 1980’s Baird was interviewed by the *New York Times* for an upcoming adaptation of Stravinsky’s *L’Histoire du Soldat*. In the interview Baird addressed the popularity of puppetry in the wake of the Muppets. Baird stated, “I get letters all the time from people saying ‘I want to get into the big money in puppetry just like Jim Henson and the Muppets.’ After 50 years in the business...’ the puppeteer said with a good-natured grin, ‘I generally write back and say, so do I.’<sup>47</sup> While Baird continued to make puppets into the final years of his life, he was forced to stop performing due to arthritis. His son Peter continued the family tradition until his death in 2004.

### **Puppet Modernism**

Throughout the 20<sup>th</sup> century, painters and playwrights alike turned to marionette theatre to reach larger audiences with visual art. Buckminster Fuller, the famed architect, designer, and writer popularized notions of synesthesia and ephemeralization,

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<sup>45</sup> Ibid.

<sup>46</sup> Mark Steinbrink, "Bil Baird and His Marionettes Are Busy with Stravinsky Now." *New York Times*, 1983.

<sup>47</sup> Ibid.

both of which are key themes in the history of puppetry.<sup>48</sup> Baird later went on to make a series of geometric marionettes, modeled after Fuller's famed geodesic dome.

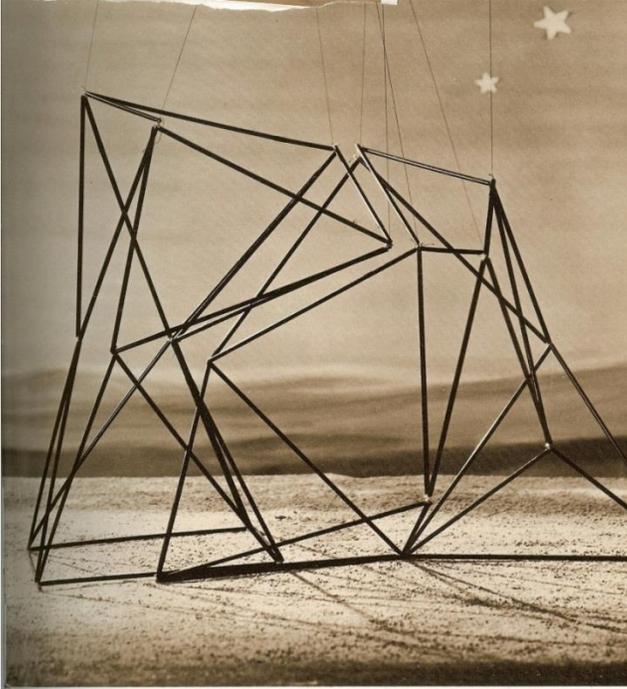


Fig. 9. Image of Baird's rendition of Fuller's Geodesic Dome.

Puppet Modernism, terminology coined by John Bell, endeavors to show how larger societal changes affected puppetry, particularly marionette theatre in the United States.<sup>49</sup> As modes of communication changed, namely with the advent of television, marionettes were able to reach increasingly large audiences. The ways in which Americans have relied on the evolution of object performance to explain and account for

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<sup>48</sup> **Synesthesia** is when one relates two, seemingly unrelated sensory perceptions. For example—the number seven is associated with the color orange. Abstract art is predicated on the conflagration of color and form which is evident in synesthesia.

**Ephemerization**, is the ability of technological advancement to do "more and more with less and less until eventually you can do everything with nothing". In puppetry the use of physics and puppet kinematics ushered in an era of increasingly abstract puppets both in geometric form and structure.

<sup>49</sup> John Bell, *American Puppet Modernism*. New York: Palgrave MacMillan, 2008. 5.

their own existence is at the very heart of puppet modernism-- it is both an artistic movement as well as a way of thinking.

The dynamics of ‘object performance’ underscore the implications of puppet theatre. In his book on *American Puppet Modernism*, Bell focuses on marionette and hand puppets as well as large scale puppets used in parades, the use of shadow figures, anime robots, masks, sacred objects, and the like. Bell traces the historic origins of puppet theatre up to the 20<sup>th</sup> century where “capitalist mass culture realized the potential of performing objects as a powerful marketing tool and employed them accordingly.”<sup>50</sup> This sentiment is echoed in Poh Sim Plowright’s article on the ‘*Desacralization of Puppetry*’ in which Plowright considers the future of stringed puppetry in the absence of rituals and stories in modern Rajasthan.<sup>51</sup> For Plowright, puppetry is a holistic practice eroding under the weight of 20<sup>th</sup> century commercialism. According to Bell, “performing objects were separated from their traditional roles in ritual, state performance, and antiauthoritarian resistance, in order to be recast as safe entertainment for children, socially productive education methods, and as propaganda techniques for public relations and advertising.”<sup>52</sup> Much of Baird’s work can be seen as antipathetic to the central tenets of puppet modernism which purported to offer an alternative to the conventions of melodrama.<sup>53</sup> Baird’s work is intentionally obvious; the physical

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<sup>50</sup> John Bell, *American Puppet Modernism*. (New York: Palgrave MacMillan, 2008). 6.

<sup>51</sup> Poh Sim, Plowright. "The Descralization of Puppetry: A Case History from Rajasthan." (2005).

<sup>52</sup> John Bell, *American Puppet Modernism*. 6.

<sup>53</sup> Ibid, 52. Puppet modernism hinges on the dexterity of puppet theatre to suggest an alternative to “the proscenium stage and realistic settings, plays, and acting styles to the realms of verisimilitude that eliminated the comforting stylizations familiar to the audiences of melodrama and well-made play; instead opted for the stark simulacra of modern life seen in the plays of Chekhov, Strinberg, Gorky, and Ibsen.”

proportions and facial expressions of his characters are over-emphasized for the sake of clarity.

The second tenet of the movement stems from “the appropriation of symbolic theater languages that three centuries of mainstream European traditions had shunned as primitive.”<sup>54</sup> The possibility of an avant-garde puppet theater was realized when Gertrude Stein and the puppeteer Donald Vestal collaborated on a production of “Identity A Poem” a script adapted from Stein’s *The Geographical History of America*.<sup>55</sup> The show was funded by the Works Progress Administration (WPA) in Chicago, of which Vestal was the newly appointed chair. Similar WPA funded efforts began cropping up throughout the country, as did marionette guilds. The Stein/Vestal collaboration illustrated the possibility of an avant-garde puppet theatre in the United States. Furthermore, there was the additional distinction in American puppetry between ‘art theater’ and ‘commercial theater’. In either case, the stage had become decidedly secular. While Baird referred to himself as a commercial artist, in practice he often rode a line between the now two seemingly distinct realms of commercial and high art, both of which changed dramatically with the advent of television.

### **Puppetry and the Moving Image**

Projected imagery revolutionized puppet performance in Europe and the United States. One of the earliest films to experiment with moving images was the surrealist film titled *Ballet Mechanique* made in 1924, in which objects: a chair, a hand, a

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<sup>54</sup> Ibid.

<sup>55</sup> Ibid. 125.

typewriter, a hat—come to life.<sup>56</sup> The show was adapted from the stage rendition which featured musical instruments—pianos, xylophones, airplane propellers, and drums-- in place of actors and dancers. The experiments in abstraction ultimately led to the cinematic tropes which popularized the medium, giving rise to movie theatres across American cities. The success of the film industry in the 1920's ultimately led to the invention of the television, making the moving image ubiquitous in American homes.<sup>57</sup> In a series of speeches from 1961 dubbed 'The Wasteland Speeches', FCC Chairman Newton Minow discussed the advent of television saying "In the 1930's and the 1940's, television's creators expressed their hope that the new medium would be the greatest instrument of enlightenment ever invented, a blessing for future generations."<sup>58</sup> Early laws as governed by the Federal Communications Act of 1934 gave networks unprecedented carte blanche to the broadcast channels.

Following the Great Depression, Congress sought to encourage investment in the burgeoning telecommunications network and the laws drafted at the time pulled language from public utilities companies. In the 1930's, the industries setting the precedent were railroad and telegraph companies, both of which were vastly different than the coaxial cable boom happening from coast to coast. Minow also referenced the "public interest" clause from the early telecommunications legislation. The clause was intended to "protect public interest", giving networks the ability to define as well as

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<sup>56</sup> Ibid, 150. Bell begins his discussion of stop motion animation and computer generated images by referring to *Ballet Mechanique*, particularly the films use of montage.

<sup>57</sup> Newton N. Minow, and Craig L. LaMay, *Abandoned in the Wasteland*, (New York: Farrar, Straus and Giroux, 1995), 18.

<sup>58</sup> Ibid, 19.

regulate the exact meaning thereof.<sup>59</sup> The rise of television ushered in a new era in puppetry, and by the 1950's and 60's, television was a booming, largely unregulated industry free from public service obligations.<sup>60</sup> Much of Baird's work was funded by his close ties to Madison Avenue. He developed advertisements for over 300 companies including: Playtex, GE, Scotch Tape, Parliament Cigarettes, Wheaties, as well as both the Chicago and New York World's fairs. Financed by Chrysler at the New York World's Fairs, the Bil Baird Company of 63 performers performed 88 times throughout the course of the 1964-65.

### **Puppet Mechanics**

In describing the relationship of the puppeteer to the puppet, German writer Heinrich Von Kleist writes, "the movements of his fingers have a kind of artistic relation to the puppets to which they are attached, almost of the same nature as numbers have to their logarithms or the asymptote to the hyperbola."<sup>61</sup> The puppet assumes the chief position once in the limelight. According to Vladimir Sokolov, the acclaimed Russian clarinetist and actor, "The marionette is not a mere embodiment of the human will and imagination it becomes instead animated and commences a life of its own."<sup>62</sup> Sokolov

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<sup>59</sup> Ibid. 4.

<sup>60</sup> Ibid. 187. From the Wasteland Speeches, in an Address to the National Association of Broadcasters, May 9<sup>th</sup>, 1961, Minow spells out the economics driving the industry. "In 1960 gross broadcast revenues of the television industry were over \$1,268,000,000; profit before taxes was \$243,900,000—an average return on revenue of 19.2 percent. Compare this with 1959, when gross broadcast revenues were \$1,163,900,000 and profit before taxes was \$222,300,000, an average return on revenue of 19.1 percent. So the percentage increase of total revenues from 1959 to 1960 was 9 percent, and the percentage increase of profit was 9.7 percent. This, despite a recession." p.186

<sup>61</sup> Heinrich Von Kleist, "On Puppet Theatre." *Salmagundi, Skidmore College*. 33/34. (1976): 84.

This piece was first published in the essay titled *Das Über Marionetten Theatre* in the Berliner Abendblätter, a German newspaper for which Von Kleist was the editor. The essay was published in four installments from December 12-15<sup>th</sup>, 1801.

<sup>62</sup> Bil Baird, *The Art of the Puppet*. New York: Crown Publishers, Inc., 1973, 17.

suggests that there is a turning point in the construction process when the relationship between subject and form begins to reflect back to the inventor, and “the marionette takes possession of its leader. Product and producer cannot be separated.”<sup>63</sup> Above all things, a puppet must be built to move.

It is no coincidence that most books and articles which offer a historical survey of puppetry begin by offering a definition of the puppet. According to Baird, “a puppet is not a bowing saint in the cathedral clock or the mechanized display figure in the store window. These are machines.”<sup>64</sup> The relationship between marionette and puppeteer illuminates the physics of the articulated subjects as they move across the stage. Watch a novice attempt to manipulate a marionette and this becomes glaringly obvious.

While traditional artifact analysis rests on an assessment of craft, society, and personality—the mechanics of marionette construction are with respect to symbolism, color, and form.<sup>65</sup> Heinrich von Kleist in his 1801 essay on fashioning marionettes additionally espoused the importance of a stringed puppet’s “disposition of the centres of gravity.”<sup>66</sup> He maintained that the ingenuity of marionette construction rests upon the trinity of “symmetry, flexibility, lightness, but all in a higher degree, and above all a more natural disposition of the centres of gravity.” The average height of a puppet varies

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<sup>63</sup> Bil Baird. *The Art of the Puppet*. New York: Crown Publishers, Inc., 1973.

<sup>64</sup> Bil Baird. *The Art of the Puppet*. New York: Crown Publishers, Inc., 1973. 13.

<sup>65</sup> Lisa Kronthal, "Conservation of Chinese Shadow Figures: Investigations into Their Manufacture, Storage, and Treatment." *Journal of the American Institute for the Conservation*. 40. no. 1 (2001).

<sup>66</sup> Heinrich Von Kleist, "On Puppet Theatre." *Salmagundi, Skidmore College*. 33/34. (1976): 85.

widely depending on what it is depicting and the size of the stage. In general, 15 to 24 inches was the standard in most construction manuals of the 1950's.<sup>67</sup>

Heinrich von Kleist suggests that marionettes, by virtue of possessing the ability to become self-conscious, are platonic in their movement and beauty. They are an amalgamation of lines and matter bending around a central axis 'devoid of consciousness' and therefore, capable of higher beauty than any human form."<sup>68</sup> This amalgamation of lines and matter is created in order to move and subsequently segue into the realm of kinetic sculpture. Conservation of a marionette must take into account 'how' and 'for what purpose' the object was created.

In analyzing terrestrial locomotion, scientists Stephen Gatesy and Nancy Pollard compared "limb motion patterns in a phylogenetic framework" to establish a series of

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<sup>67</sup> Florence Featherston Drake,. "The Art of Making Lifeline Marionette Bodies." *Popular Science Monthly*, February 1, 1936. <http://www.popsci.com/archive-viewer?id=yCUDAAAAMBAJ&pg=64&query=1936>.

The annals of Popular Science Monthly began publishing in the late 1800's. At the time there was a surge of home marionette-making that began in the late 1920's and continued through the 1950's. The majority of the marionettes in Bil Baird's collection are constructed with respect to the diagram in Figure 10.



Fig. 10. Diagram of marionette from a 1936 edition of Popular Science Monthly

<sup>68</sup> Heinrich Von Kleist, "On Puppet Theatre." *Salmagundi, Skidmore College*. 33/34. (1976).

angular data.<sup>69</sup> In modern robotics, this data is used to understand more about a person's quotidian life. In short, kinematic analysis does for the gait what psychoanalysis does for the psyche. Motion can be diagnostic, such that a person's stride reveals clues about age, sex, health, emotion, and even individual identity."<sup>70</sup> The puppeteer attempts to translate these same characteristics: signifiers of time, place, character—to the stage. Baird often remarked that a puppet must be 'more' than its real-life counterpart. It's perhaps for this reason that his female characters were renowned for being disproportionately well-endowed.



Fig.11. Chorus-line rod puppets, 1971.  
MacNider Art Museum, Mason City, Iowa



Fig. 12. O'Toolova, used on CBS-TV 1953  
MacNider Art Museum, Mason City, Iowa

Historian Jules David Prown contended that to view an object as a 'fiction' "reduces the distinction between art and artifacts."<sup>71</sup> He goes on to analyze a pewter teapot in careful detail, examining its form. According to Prown, "The vessel is divided

<sup>69</sup> S. M. Gatesy, and N.S. Pollard. "Apples, Oranges, and Angles: Comparative Kinematic Analysis of Disparate Limbs." *Journal of Theoretical Biology*. 282. (2011): 11.

<sup>70</sup> Ibid, 7.

<sup>71</sup> Jules David, Prown. *The Truth of Material Culture: History or Fiction? (American Artifacts: Essays in Material Culture.)* 16.

by a horizontal line three-fifths of the way up where the lid rests on the body...viewed from the side the object presents a series of S-curves, including the handle...”<sup>72</sup> Similar analysis of marionette construction accentuates the connection between object and historical narrative.

### **Conservation of an Historic Puppet Collection**

Throughout the history of puppetry, the construction materials have largely remained constant: wood, fabric of natural fibers or animal skin, bones, stone, and the like. It is only in the last sixty years that puppets began incorporating the widespread use of plastics and latex. According to Bell, “This mélange of “primitive and “modern” materials and technologies became typical of the hybrid culture that developed in the United States over the next century.”<sup>73</sup> It is precisely this same juxtaposition of old and new, organic and inorganic compounds, that continues to shape the debate around the proper display and storage conditions of the objects.

Perhaps one of the largest problems in displaying and conserving puppets is their physical construction. Marionettes in particular, are complex composite objects made of both organic and inorganic materials. In *The Fundamentals of Marionette Care* the authors state, “Inorganics...by their very nature, are somewhat more stable but the wrong conditions can catalyze their natural tendencies to revert to their component parts.”<sup>74</sup> Baird’s collection can roughly be divided into two sections: Puppets pre-1960 and puppets post-1960. As modern materials became increasingly common and

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<sup>72</sup> Ibid.

<sup>73</sup> John Bell. *American Puppet Modernism*. New York: Palgrave MacMillan, 2008. 220.

<sup>74</sup> Mina Gregory, Maureen Russell, and Cara Varnell, "The Fundamentals of Marionette Care," *American Puppetry*, ed. Phyllis T. Dirks (Jefferson, North Carolina: McFarland & Company, 2004). 259.

affordable, Baird embraced synthetic fabrics, plastic, foam rubber, metals, synthetic dyes, and latex. The puppets made before that time were made of wood, fabrics including cotton, velvet, and wool, and oil paints. Thus, conservation efforts differ depending on the puppet and its use.

In *The Fundamentals of Marionette Care*, “Metals, ceramics or glass do not deteriorate like the molecular disintegration of organic materials, but rather their deterioration is an effort to separate out into their basic compositional materials.”<sup>75</sup> With some exceptions, the Baird puppets do not incorporate ceramics- however metals are frequently present both for construction (joints, screws, tin casings, etc) and aesthetic purposes (crowns, jewelry, coatings on sequins, etc.). One of the greatest challenges in conserving marionettes is attending to the amalgam of elements present in each object. In addition to examining the degradation of modern materials, this study will also look at stain removal, light exposure, integrated pest management, as well as exhibition and use.

### **Modern Materials**

By the late 1960’s, Baird had segued almost entirely to the use of modern materials. Jim Henson, a protégé of Baird’s recollected that at least 30 of the *Muppeteers* were trained under Bil Baird’s tutelage.<sup>76</sup> Baird was known for using materials such as rubber, high-tech plastics, Styrofoam, acrylic paints, PVC, etc. The later puppets in the collection are a testament to “the inherent instability of the materials,

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<sup>75</sup> Ibid.

<sup>76</sup> Lowell Swartzell. *A Short View of American Puppetry. American Puppetry*. Edited by Phyllis T. Dirks Jefferson, North Carolina: McFarland & Company, 2004. 29-36.

such as synthetic foam products often used for some contemporary puppets”.<sup>77</sup> The Bread and Puppet Company, a politically radical troupe organized in the 1960’s, made puppets from celastic, “the plastic impregnated cloth used by window decorators, that was dipped in the solvent acetone and then applied to a clay form to quickly make strong, waterproof puppets or masks.”<sup>78</sup> At the time these materials provided an affordable solution to some of puppetry’s greatest obstacles. Jim Henson’s puppets in Sesame Street were often experiments in new materials. The Muppets were made with latex, celastic, PVC, and other forms of plastic foam.<sup>79</sup> Unfortunately, many of the puppets fashioned out of modern materials have begun to break down and are beyond repair. The next several chapters of this paper will discuss the conservation of these objects, from wood artifacts to modern plastics.

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<sup>77</sup> Mina Gregory, Maureen Russell, and Cara Varnell, "Fundamentals of Marionette Care," *American Puppetry*, ed. Phyllis T. Dirks (Jefferson, North Carolina: McFarland & Company, 2004).

<sup>78</sup> John Bell. *American Puppet Modernism*. (New York: Palgrave MacMillan, 2008).

<sup>79</sup> John Bell. *American Puppet Modernism*. New York: Palgrave MacMillan, 2008. 223.

## CHAPTER 4

## RESULTS

The purpose of this thesis was to establish a framework for analyzing and conserving a contemporary puppet collection. To that end, this section includes a decade by decade morphology of ten puppets from the Bil Baird collection, in the Charles H. MacNider Art Museum in Mason City, Iowa, spanning the period from 1918 to 1982. Each artifact has been classified according to its constituent parts and placed in its larger historical context. The constituent parts of the puppet were documented on the original assessment form compiled as part of the Otto Thieme Memorial Internship Program.

**I.**

**Date:** 1918

**Accession #:** 1982.3.39

**Designer:** Bil Baird

**Materials:** Wood, linen pants, black velvet coat, silk vest, and chiffon scarf. Missing manipulator and broken strings.



Fig. 13. Baird's first puppets, 1918  
MacNider Art Museum, Mason City, Iowa



Fig. 14. Patriot puppet in detail  
MacNider Art Museum, Mason City, Iowa

**Conservation Context:** One of the oldest items in the collection, this puppet is one in a series of five hand-carved miniature marionettes constructed in 1918. Because these puppets date to the early part of the 20<sup>th</sup> century, it is questionable as to whether the color in the fabric stems from natural or synthetic dyes. Largely as a result of the sanctions during World War I and decreased trade with Germany, the American dye industry developed.<sup>80</sup> The industry grew ten-fold and a paper published in 1926 gave the staggering numbers, “Seven dye factories in 1916 multiplied to eighty-one by the end of 1917 and in one year their production of dyes equaled prewar importation—about 46 million pounds.”<sup>81</sup> In 1917 American made indigo dyes sold for \$1.42 per pound and by 1925, the same product sold for \$0.14 per pound.<sup>82</sup>

As evinced in Figure 13 the costumes, specifically those with black and brown fabric, have degraded beyond repair. It is highly likely these materials were dyed with tannins as a form of mordant to permanently set the color of the fabric, which has subsequently deteriorated as a result of the tannate salts in the iron. Natural fabrics (i.e. cotton and silk) dyed with tannins have a very high acidity which causes the breakdown of the hydroxyl and carboxyl groups. In the definitive *Chemical Principles of Textile Conservation*, authors Tímár-Balázsy and Eastop write, “the internal acidity of the dye causes accelerated hydrolytic decomposition of the cellulose of vegetable fibres and

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<sup>80</sup> Jane Farrell-Beck and Jean Parsons. *20th Century Dress in the United States*. 2 ed., (2007) New York.

<sup>81</sup> M.L. Crossley. Ten Years of Progress in the Dye and Intermediate Industry. *Industrial and Chemical Engineering*. 18(12). 1926. 1322-1323.

<sup>82</sup> Ibid.

proteins of silk or wool fibres.”<sup>83</sup> The shattered fabric is evidence of the hydrolytic decomposition seen here.

Nothing can be done to reverse this damage, but conservation efforts should focus on proper archival storage in a non-acidic environment with archival grade cardboard. The deterioration of the untreated wood will add to the already acidic environment so efforts to mitigate the condition will ensure a prolonged life for the puppets in storage.

**Historical Context:** Created by Bil Baird when he was twelve years old, these were his earliest puppets. Growing up in the Midwest, Baird took a liking to puppetry after Tony Sarg and his traveling company stopped in Northern Iowa and performed at Baird’s school. These early renderings foreshadow the intricate carving that characterized his unique style, one which he developed throughout his entire career. At the time he was making his first marionettes in Northern Iowa, the United States was entering World War I, the women’s suffrage movement was in full swing, and the national sentiment was poised between Edwardian ideals and the roaring 1920’s.

## II.

**Date:** 1919 and performed through the early 1920’s

**Accession #:** 1980.3.4 (jacket) 1980.5 a, b (wooden heads)

**Designer:** Made by Tony Sarg for “The Rose and the Ring”. Costume by Edith Hiller Parsons.

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<sup>83</sup> Ágnes, Tímár-Balázs and Dinah Eastop. *Chemical Principles of Textile Conservation*. Oxford, UK: Butterworth Heinemann, 1998.

**Materials:** Two wooden heads, one with blue eyes and one with brown. Red velvet jacket with metallic thread embellishments. White satin lining with chiffon sleeves.



Fig. 15. Costume and heads from a collaboration between Edith Hiller Parsons and Tony Sarg MacNider Art Museum, Mason City, Iowa

**Conservation Context:** While many of the puppets in the collection would benefit from stain removal, the lack of chemicals or a laboratory at MacNider Museum to carry out the conservation makes these efforts largely unfeasible. Most, if not all of the puppets in the collection were used prior to storage and have become stained through wear and tear. Because most of the stains derive from particulate matter, Orvus will likely be a viable solution for the puppet collection. Ethanol may also be useful in cases where lipids are the cause of the stain. There is also evidence to suggest that a combination of the two, Orvis and Ethanol, may be useful in conjunction. Staining as a result of a buildup of dust is ubiquitous in the puppet collection and will require an anionic detergent “with a

slightly alkaline pH for cellulose and neutral pH for protein fibers.”<sup>84</sup> Both anionic and non-ionic detergent solutions, as well as pH strips will be the most useful in conserving the collection on site at MacNider, as these supplies are readily available to a conservator without a lab and access to proper chemical storage. Additionally, proper storage of the metal components on the costumes will also be important to prevent further staining from the metallic fibers and buttons.

**Historical Context:** Made by his mentor, Tony Sarg, this was one of many puppets in Bil Baird’s personal collection. Both Tony Sarg and Bil Baird frequently collaborated with a noted costume designer named Edith Hiller Parsons who is also designed all the costumes for the Sound of Music puppets. Based on the story by William Thackeray, the characters in the performance of *The Rose and the Ring* undergo many identity changes. For the performance, the marionettes were constructed to enable swift costume changes throughout the eight scene performance.<sup>85</sup> The *New York Times* declared the pieces “adept beyond most of their kind” and encouraged audiences of all ages to attend the inaugural performance. Edith Hiller Parsons spared no detail in tailoring the garments, which in most cases had to be made in double or triplicate.

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<sup>84</sup> Tímár-Balázs, Ágnes, and Dinah Eastop. *Chemical Principles of Textile Conservation*. Oxford, UK: Butterworth Heinemann, 1998.

<sup>85</sup> "Marionettes Here Again." *New York Times*, April 23, 1919.

**III.****Date:** 1932-1935**Accession #:** 1982.5.21**Designer:** Bil Baird**Materials:** Wooden marionette horse with an all leather body, harness and saddle. Wool yarn for mane.

Fig. 16. Leather experimental horse  
MacNider Art Museum, Mason City, Iowa

**Conservation Context:** The experimental horse was made for use from 1932-1935.

While worn thin, the leather remains intact and with careful preservation may remain stable for quite some time. As is often the case with rare book collections, one of the greatest threats to aged leather is bloom, a whitish coating stemming from a build-up of

lactic acids, or salt. According to a study conducted at the University of Chicago's Special Collections Department, bloom crystals appear most notably on tanned leather that has been exposed to air, over the course of a long period of time.<sup>86</sup> While bloom is difficult to remove entirely, circumstances can be mitigated by gently washing the leather with oils and removing the crystal build up.

**Historical Context:** Following the great depression, puppetry experienced a rise in popularity in children's entertainment. Home puppet-making how-to's could be found in popular science magazines and hardware stores. The 1930's ushered in American Puppet Modernism, most notably in a performance based on a poem by Gertrude Stein titled 'Identity A Poem'.<sup>87</sup> The work was funded by the Works Progress Administration (WPA) in Chicago which also funded similar efforts to keep Americans employed and entertained throughout the Great Depression.

#### IV.

**Date:** Early 1940's

**Accession #:** 1981.2.12

**Designer:** Bil Baird

**Materials:** Hand-painted ballerina marionette carved in wood with a blue tutu made of tulle. The tulle is starched to add stiffness and is either nylon or silk. Samples for fiber testing were not taken during the assessment.

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<sup>86</sup> Jean Gottlieb, "A Note on Identifying Bloom in Leather Bindings," *Journal of the American Institute for the Conservation of Historic and Artistic Works*, 22, no. 1 (1982): 37-40

<sup>87</sup> John Bell. *American Puppet Modernism*. (New York: Palgrave MacMillan, 2008). 125.



Fig. 17. Ballerina featured in Radio City Music Hall  
MacNider Art Museum, Mason City, Iowa

**Conservation Context:** Two conservation issues arise with the ballerina marionette featured in Figure 17. Firstly, she is hand-painted on wood and secondly, the tulle tutu has become hard and brittle over the years. While the painting on the marionette is in remarkably good condition, inpainting—repairing small areas of loss with a very fine paintbrush, is the only possible solution for further degradation. At this time, restorative efforts are unnecessary although the piece could benefit from gentle wet cleaning with only water. Unless samples of the paint are identified in a lab, it is highly inadvisable to clean the piece using anything other than water. Similarly, efforts to clean the tulle should remain minimal in order to prevent damage to the painted body.

**Historical Context:** The note affixed to the marionette reads: “From Radio City Music Hall Christmas Show, early 1940’s, sculpted for 6,000 seat house. Operated on twenty-one ft. strings. She worked with the soldier and the clown and she fell for the soldier.”

While the front lines of the Second World War were across the ocean, American

sentiment was with the soldiers in Europe, especially during the holidays. Since 1933, the Christmas Spectacular at Radio City Music Hall has remained a holiday standard. As stated in Baird's note, the ballerina was operated by puppeteers twenty-one feet above, in the stage rafters. She shared the stage with the famous Rockettes before an audience of over 6,000 people. Located in the same building as the Radio Corporation of America, Radio City Music Hall was originally the largest movie theater in the United States. The venue has changed hands many times since opening its doors in the mid-1930's however it remains one of the most popular tourist destinations in New York City.

**V.**

**Date:** 1945

**Accession #:** 1985.1.32

**Designer:** Bil Baird

**Materials:** Wooden marionette in cotton suit with checkered vest and fully-articulated eyebrows and hand joints.



Fig. 18. Boojum  
MacNider Art Museum, Mason City, Iowa

**Conservation Context:** One of the defining characteristics of the puppet in Figure 18 is his articulated eyebrows. Affixed by metal components, the eyebrows raise up and down with the movement of a string that runs through the eye sockets and out the back of his head. Similarly, his feet and hands are also held together by small metal components, all of which are susceptible to corrosion. Unless the metal is gold, it is easily tarnished by particulate matter, oils, lipids, calcareous deposits, and dust. Once a metal is tarnished it often accumulates a surface layer that is unfortunately, not water soluble. This tarnish is unavoidable, arising from chemicals found in everyday atmospheric conditions. The black layer that begins to build up presents a problem in this case because it stands to stain the puppet's clothing and further corrode, causing structural damage to the wooden base. Where possible, tarnish removal from metal components in the collection will benefit each puppet, as will wrapping metal components in unbuffered tissue paper prior to permanent storage.

**Historical Context:** Boojum played the villain in "A Monacle Built for Two" a play by Alex King, performed at the Waldorf Astoria Perro Keet room. Commissioned by Clare Boothe Luce on the occasion of the presidential election in 1948, the marionette was part of the entertainment at the election party of Thomas E. Dewey. On the evening of November 3<sup>rd</sup>, 1948 *The Chicago Tribune* famously mis-declared "Dewey Defeats Truman" before the official election results determined Truman the victor. The Truman victory shook faith in the reliability of public opinion polling, which had only recently become au courant when Charles Gallup began using quota sampling in the mid-1930's. Pre-election opinion polling showed Thomas E. Dewey winning by nearly fifteen

percentage points which made the election night party an especially celebratory evening. When early election returns began pouring in, the public became increasingly skeptical of the polling data and Charles Gallup was forced to personally visit the more than 30 newspapers who unsubscribed from the Gallup Poll in the days following the election.

## VI.

**Date:** 1953

**Accession #:** 1982.4.39

**Designer:** Bil and Cora Baird

**Materials:** Orange velveteen snake made with a series of plastic cups, wooden head, and plastic sequins.



Fig 19. Orange snake  
MacNider Art Museum, Mason City, Iowa



Fig. 20. Orange snake in detail  
MacNider Art Museum, Mason City, Iowa

**Conservation Context:** Measuring approximately five feet long, the marionette in Figure 19 was constructed by affixing a series of plastic cups together with a rope down the center, making the puppet able to move with the agility of a snake. Due to the snake's size it has unique storage requirements. At present, all the marionettes in the

collection are housed in traditional cardboard boxes in wooden storage. With an additional three coats of polyurethane varnish to the wooden storage space, the concentration of formaldehyde off-gassing will decrease by over 50%.<sup>88</sup> Careful vacuuming of the piece will pick up the residual metallic coating on the sequins which is flaking off, featured in Figure 20. As is often the case with older sequins, the substrate is made of gelatin which readily dissolves with most solvents and dry cleaning chemicals. While there are some stains on the orange velveteen fabric, both wet cleaning (cleaning with water) and dry cleaning (waterless cleaning with chemicals) should be avoided in order to prevent irreparable damage to the sequins.

**Historical Context:** Fashioned for a performance at the Henry St. Settlement—a social services organization located in New York’s lower east side—the marionette was made and operated by Cora Baird. Catering to low-income families in New York City since the late 1800’s, the Henry Street Settlement was and is a non-profit organization dedicated to promoting the arts, among other social services in the metro area. Bil and Cora Baird operated out of the eponymously named Bil and Cora Baird Puppet Theatre in Greenwich Village and throughout the 1950’s funded their largely philanthropic performances by making puppets for print and television ad campaigns.

## **VII:**

**Date:** 1965

**Accession #:** 1987.6.1-3

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<sup>88</sup> Ágnes Tímár-Balázs, and Dinah Eastop. *Chemical Principles of Textile Conservation*. Oxford, UK: Butterworth Heinemann, 1998. 343.

**Designer:** Bil Baird

**Materials:** Hand-painted wooden marionettes with cotton costumes, a felt hat with a feather, and yarn hair.



Fig. 21. Dancers from *The Lonely Goatherd*  
MacNider Art Museum, Mason City, Iowa

**Conservation Context:** Light is one of the most damaging elements to affect organic materials. While the breakdown of modern materials is largely due to the decay of their constituent parts, cellulosic materials like wood, fabric made of natural fibers, and to some extent plastic, are damaged cumulatively by light exposure. Light weakens an object's molecular bonds along all parts of the electromagnetic scale from UV (ultraviolet) to infrared.<sup>89</sup> Even under highly regulated light levels, textiles and natural dyes and pigments are “by far the most vulnerable to photochemical changes.”<sup>90</sup> While UV radiation breaks down an objects molecular structure, infrared light conversely, emits heat. This heat vaporizes water molecules and in turn, causes the object to become

<sup>89</sup> Mina Gregory, Maureen Russell, and Cara Varnell, "Fundamentals of Marionette Care," *American Puppetry*, ed. Phyllis T. Dirks (Jefferson, North Carolina: McFarland & Company, 2004). 260.

<sup>90</sup> *Ibid.*

dry and brittle. This is especially notable with puppets because of they are often comprised of multiple materials. In one instance the pigment used to color the puppet's face has become dry and brittle while the substrate of latex beneath the puppet has also become dry and compacted over the years. This combination of factors can lead to irreversible cracking visible on the surface of the puppet. While daylight is potentially the most harmful form of light because it incorporates all three forms of UV, visible, and infrared light, even darkened museum storage and display with UV filters pose a problem to such a vulnerable collection.

*The Sound of Music* puppets draw a large number of visitors to MacNider Museum, and therefore are on year round permanent display. While the lights in the room are more dim than anywhere else in the museum, it is important to consider the long term effect on the object. Because puppets are composite structures and susceptible to so many forms of degradation, it is advisable to avoid long-term display. The general rule of thumb for textile conservators is “one year of exposure time, at normal museum hours and under low light levels of five to eight foot-candles, for every ten years.”<sup>91</sup>

**Historical Context:** Created in 1965 for the film *The Sound of Music* starring Julie Andrews, these two marionettes were featured in the *Lonely Goatherd*, a puppet show performed in the movie. Based on the Broadway production, the film version captivated audiences worldwide and won five Academy Awards.

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<sup>91</sup> Ibid, 262.

**VIII:****Date:** 1972**Accession #:** 1982.4.19**Designer:** Bil Baird**Materials:** Latex, acrylic paints, wool blend yarn, polyester paisley shawl.

Fig. 22. Cartonella  
MacNider Art Museum, Mason City, Iowa

**Conservation Context:** This hand puppet is one of the best examples in the collection of the cleaving that is ubiquitous on the latex puppets. Plasticizers used in the synthetic polymers do not age well and present a serious threat for long term preservation. Tímár-Balázs and Eastop describe the process in simple terms, “low molecular weight plasticizers are bonded only by secondary bonds to the polymer chains and may migrate to the surface of the polymer...the polymer also becomes more and more rigid as the plasticizer migrates out.”<sup>92</sup> This imbalance is visible in the surface cracks where the plastic is breaking down. Cleaving, the term used to describe the surface cracks, is a condition often noted in paintings as the layers of paint break down. Often this damage

<sup>92</sup> Tímár-Balázs, Ágnes, and Dinah Eastop. *Chemical Principles of Textile Conservation*. Oxford, UK: Butterworth Heinemann, 1998. 323.

is irreversible though in some cases, the item may benefit from wet cleaning or heat removal of the outer layer.<sup>93</sup> Without the use of a lab, no measures ought to be taken with regard to wet cleaning or heat removal of the outer layer. The puppet would suffer further damage and therefore, proper storage in a non-acidic environment is recommended. It is imperative the latex puppets remain in a humidity controlled environment as moisture in the air exacerbates the condition.

**Historical Context:** From “Cartonella: A Milk Carton Extravaganza”, 1972. A film about the importance of milk. Cartonella, the fortune-telling cow, was so popular Bil Baird had to make an enormous version of her for the Macy’s Thanksgiving Day Parade. Interestingly, Bil Baird worked with Tony Sarg on the first balloon puppets used in the Macy’s Thanksgiving Day Parade back in the 1930’s.

**IX:**

**Date:** 1970’s

**Accession #:** 1985.1.9

**Designer:** Bil Baird

**Materials:** Latex, polyester jersey knit dress with cotton apron, wool blend yarn for hair, acrylic painted features.

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<sup>93</sup> Ibid. 324.



Fig. 23. Goldilocks  
MacNider Art Museum, Mason City, Iowa

**Conservation Context:** The hand-puppet featured in Figure 23 is the collections most notable example of crazing, the color change seen in the latex that plagues the puppets made after 1968. By the latter part of the 20<sup>th</sup> century, Baird was using rubber, high-tech plastics, Styrofoam, acrylic paints, and PVC. The quality of the later puppets is decidedly worse as a result of “the inherent instability of the materials, such as synthetic foam products often used for some contemporary puppets” (Gregory, Russell & Varnell, p.259, 2004)<sup>94</sup>

In some cases, the degradation of the latex, in conjunction with the accumulation of grime has yielded a gummy texture similar to that of a dirty pencil eraser. Sticky lubricants can be removed with acetone or ethanol, however both risk dissolving the

<sup>94</sup> Mina Gregory, Maureen Russell, and Cara Varnell. *Fundamentals of Marionette Care. American Puppetry*. North Carolina: McFarland & Company, 2004.

substrate. This is also a concern when removing stains from some of the petroleum based synthetic fibers. Cellulose acetate as well as polyester were commonly used. In several cases, opening the box of a marionette with a cellulose acetate costume, the off-gassing is immediately noticeable. In the case of the cellulose acetate pieces the off-gassing of the acetyl groups emitted a smell reminiscent of vinegar.

**Historical Context:** While Baird continued to work until his death in 1987, he spent a great deal of time teaching puppeteers like Jim Henson during the 1970's. There is a noticeable similarity between Baird's later puppets and Henson's Muppets as Baird handed the reins to his apprentice who later dominated the world of puppetry until the rise of stop-motion animation.

**X:**

**Date:** 1979-1982

**Accession #:** 1983.3.1-8 (dancers), 1985.1.28 (feminist)

**Designer:** Bil Baird

**Materials:** 1) Dancers-- Eight dancers, all with felt dresses, sequin jewelry sewing on, yellow yarn hair, and fully articulated, spring-loaded breasts. 2) Feminist—Latex, acrylic paints, wool blend yarn for hair, cotton clothing.



Fig. 24. Chorus Line dancers  
MacNider Art Museum, Mason City, Iowa



Fig. 25. Feminist  
MacNider Art Museum, Mason City, Iowa

**Conservation Context:** 1) Eight dancers, all with felt dresses, sequin jewelry, yellow yarn hair, and fully articulated, spring-loaded breasts. 2) The feminist featured in Figure 25 is an excellent example of cleaving and color loss on the latex face. Her brown yarn hair was home to countless carpet beetles. One of the biggest threats to the Bil Baird puppet collection has been the carpet beetle; the damage is extensive and irreversible. Many of the puppet costumes are made of wool or silk, attracting carpet beetles which thrive on proteinaceous fibers.<sup>95</sup>

In an effort to track pest infestation in the collection, conservators and curators rely on small traps that enable them to identify the pest and subsequently understand its lifecycle and feeding habits.<sup>96</sup> Many of the puppets in permanent storage require

<sup>95</sup> Tímár-Balázs, Ágnes, and Dinah Eastop. *Chemical Principles of Textile Conservation*. Oxford, UK: Butterworth Heinemann, 1998.

<sup>96</sup> *Ibid*, 263.

additional anoxia, especially those puppets with fur or feathers as part of their structure. Additionally, one of the most time consuming aspects of conservation for the puppets in permanent storage will be a thorough vacuuming (with screen) of each and every article of clothing and hair piece.

**Historical Context:** Baird was known for his proportionally well-endowed female puppet. By contrast the ‘feminist’ hand puppet in Figure 25 was created for a Mounds Candy commercial in 1972 and features decidedly different proportions. With a nod to Gloria Steinem, the feminist puppet is flat-chested, dressed in military-drab, and wearing wire-rimmed sunglasses.

### **Discussion**

Interpreting the collection for conservation, there is a chasm between the puppets created pre-1960 and the puppets created post-1960. The use of modern materials becomes ubiquitous in the collection post-1960 and the vast majority of the objects are now beyond repair. Fashioned primarily from latex and polyester, the puppets and their costumes have suffered irreparable stain damage and chemical degradation. The puppets created prior to 1960, often made with wood and cotton costumes have withstood the test of time far better than their more recent counterparts. This chasm reflects the durability of goods made during this time as United States manufacturing became increasingly disposable. The segue to modern materials buttressed Buckminster Fuller’s notions of ephemeralization—to do more and more with less and less until eventually you can do everything with nothing—enabled puppetry to segue to the television audience and changing advertising industry which needed quick turnaround and puppets made on a

budget. While this was not the intended use of Fuller's 'ephemeralization' which spoke to the potential economic productivity of factories and assembly lines, craftsmanship, small details, the intricate handmade costumes seen in the ballerina in figure 17, became a thing of the past, most notable in the unfinished hems on the puppet costumes post-1960. The challenges for conserving the more modern puppets in the collection mimic the challenges faced by any museum with a collection of contemporary art made by modern materials. The Tate Museum in the United Kingdom is home to one of the premier centers for contemporary sculpture conservation and there, conservators face similar problems with the degradation of plastics and synthetic fabrics. In the museum's collection conservators have ruled many of the cellulose nitrate and latex sculptures unexhibitable and beyond repair, therefore detailed photo-documentation is imperative for the preservation of the work. In an effort to maintain a collection of modern puppets for as long as possible, a climate controlled environment with relative humidity is essential to slow the rapid degradation of plastics.

The highest preponderance of pest damage was seen on the wool blend, knit fabrics which were featured more prominently on the puppets post-1960. Blended knit fabrics require less tailoring and were ideal for quick costuming. Unfortunately, in the case of the MacNider puppets these costumes have suffered loss due to pest infestation namely, carpet beetles and moths. Proper museum storage conditions are of the utmost importance in puppet storage due to the wide range of materials and conservation afflictions. Additionally, puppets require spacious storage conditions in an effort to preserve their intended shape and gait.

## CHAPTER 5

## CONCLUSION

Writing an essay on material culture, Historian Jules David Prown asked ‘if artifacts express culture metaphorically, what kinds of insight can they afford us?’<sup>97</sup> Housed in a small museum in Northern Iowa, the Bil Baird puppet collection offers an unassuming phenomenological lens into American life throughout the 20<sup>th</sup> century. Bil Baird made his earliest puppets the same year the United States entered the Great War and he continued to work until his death in 1987, when puppetry was annexed to stop motion animation and the motion picture industry. Baird’s collection includes work from two World’s Fairs, multiple space simulations, and countless television shows, advertisements, and movies. Both the materials used for puppet construction and the context in which they were conceived magnify some of the seminal technological and political strides that shaped the United States in the 1900’s.

In addition to the provenance of the collection, the wide range of materials used in puppet construction present a unique challenge to a conservator. The complex composite structure of the objects makes uniform conservation efforts significantly more challenging. A useful stain removal technique for a costume may pose a threat to the wood or latex form. While some objects are painted others are built of wood, metal, or plastic. In the collection, no two objects are alike making it difficult to establish a uniform practice for conservation treatment. At most, the 400 items in the collection can

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<sup>97</sup> Jules David, Prown. *The Truth of Material Culture: History or Fiction? (American Artifacts: Essays in Material Culture.)* 20.

be classified according to materials and conservation afflictions and subsequently triaged according to complementary parts.

### **Further Research**

A primary concern of the conservator is the intention of the original designer/artist. Unlike a piece of fine art such as a painting, a puppet stands to malfunction, break, or suffer from disuse in storage. These are subjects worth further research. As a result of their intended use for the stage, they are not simply objects that can be placed on a wall. This presented a particular problem for MacNider Museum which is an American fine arts museum. Where puppets fit into the categories of folk art and fine art is a debate among curators and conservators alike, one worth further research. Were the puppets not a significant source of funding for the museum, the possibility of deaccessioning the collection would stand as the museum distills its holdings within the confines of American Fine Art. One thing is certain, puppets are kinetic sculptures which can inform a collection of fine art through its varied use of color, form, and abstraction.

Also a matter of further research is the designer Edith Hiller Parsons whose intricately made costumes were commissioned by both Tony Sarg and Bil Baird. A preliminary search on Parson's career was unsuccessful and further research would be of significant value to the history of puppetry.

### **Limitations**

This research was limited by two primary factors: lack of a conservation lab and limited accessibility to the puppet collection. With state-of-the-art conservation

resources, the results of this study would use more elaborate stain removal techniques and professional photo documentation techniques. Bil Baird was married three times in his life and his third wife is alive, living in New York. There is a possibility that she or another living relative has a collection of his papers which could enrich the scope of this research. Baird's drawings and notes on construction and intended use would be invaluable resources to both the conservator as well as puppet historian.

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## APPENDIX A

## Conservation Assessment for Puppets in Permanent Storage

\*Highlighting indicates pest infestation

Accession Number	Description	Notes	Conservation
1982.3.2	Robin marionette	From "Spring Festival" NBC-TV, performed with Benny Goodman marionette	n/a
1982.5.21	Tallulah marionette	Experimental horse marionette, 1932-35	The leather would benefit from stabilization in certain places, particularly around leg joints and on the neck.
1982.3.22	Political donkey	Hand/rod puppet with plaid shirt	n/a
1982.4.110	Political elephant	Elephant head with grey felt ears and painted face	n/a
1982.5.27	Starting Wear	Lanky black marionette with long beak and blue hands, feet, and eyes. Wearing long black velvet ensemble with fur embellishments.	Fur is shedding, needs to be lint rolled to stop shedding. Rehouse with other pieces that have fur, in a pest-free box.
1982.5.31	Butterbel	Female marionette with yellow hair and green cowboy boots. From "Life with Snarky Parker" CBS-TV series, 1950.	Consider cleaning stains in the shirt and hair. Stabilize seams in shirt and stitches in the skirt waist. Re-house in pest-free box.
1982.4.33a	1 of 4 UNICEF children	Little boy marionette with yellow gingham shirt and blue pants, carrying a school folio. Appeared in UNICEF Christmas commercial, 1953-55. *One note card says commercial is from '53-55, another says 1958-60.	n/a
1982.4.33b	2 of 4 UNICEF children	Little girl marionette with black bobbed haircut and white/blue dress with green shoes. . Appeared in UNICEF Christmas commercial, 1953-55. *One note card says commercial is from '53-55, another says 1958-60.	n/a
1982.4.33c	3 of 4 UNICEF children	Little boy marionette with black felt hair, striped shirt, jeans, and black shoes. Appeared in	n/a

		UNICEF Christmas commercial, 1953-55. *One note card says commercial is from '53-55, another says 1958-60.	
1982.4.33d	4 of 4 UNICEF children	Little girl marionette with blue eyes, wearing blue dress with white collar and white pants. Appeared in UNICEF Christmas commercial, 1953-55. *One note card says commercial is from '53-55, another says 1958-60.	n/a
1981.2.22	Brown haired male hand/rod puppet	Man with brown hair wearing a plaid jacket and red bowtie. Used in a Greenwich Savings Bank, NY, TV commercial, 1979.	n/a
1981.2.23	Boy with orange hair, hand/rod puppet	Boy with orange hair hand/rod puppet. Used in a Greenwich Savings Bank, NY, TV commercial, 1979.	n/a
1981.2.25	Girl with yellow hair	Girl with yellow hair hand/rod puppet. Used in a Greenwich Savings Bank, NY, TV commercial, 1979.	n/a
1981.2.24	Older female hand/rod puppet	Older female hand/rod puppet in red dress with grey hair and glasses. Used in a Greenwich Savings Bank, NY, TV commercial, 1979.	n/a
1982.4.39	Snake	Big orange snake operated by Cora Baird at the Henry St. Settlement, 1953.	Snake could benefit from stain removal attempts. Re-house in pest-free box. *no recommendation for sequin-loss.
1982.4.35	Hill Girl	Blonde female marionette in a calico dress with an apron, bonnet, and sausage links. From CBS-TV morning show, 1954.	Vacuum with a screen. Remove sausage links which are tied to the head. Use thread (in lieu of glue) to re-attach hair curls.
1982.3.14	Pals Vitamin Owl	Big yellow owl hand puppet. Made for a commercial, 1964.	Vacuum with a screen. Re-house in a pest-free box.
1982.2.56	Female Jarabe Dancer	Female hand puppet with black hair in a wide skirt with white ruffle lining and matching bodice. Jarabe dancing is a traditional type of Mexican folk dance.	Bodice and skirt lining would benefit from a wet cleaning. Vacuum with a screen. Rehouse in a pest-free box.

1982.2.55	Male Jarabe Dancer	Male marionette in yellow velveteen suit with bolero style jacket and black mustache.	Remove extra pins in fabric. Stained velveteen could benefit from stain removal. Re-house in a pest-free box.
1982.3.30	Ur Man	Egyptian male marionette with long hair and beard and brown tunic. From "The King Who Came to Breakfast" for Nabisco, 1948. A film about the history of wheat.	Marionette is in very good condition save the black carpet beetle infestation. Needs to be vacuumed with a screen and rehoused in a pest-free box.
1982.4.27	Carbohydrate	Lanky blue marionette. From "The King Who Came to Breakfast" for Nabisco, 1948. A film about the history of wheat.	Needs to be rehoused in a pest-free box.
1982.4.22	Protein	Male marionette in weight-lifting garb (red suit with leopard print sash) with moustache. From "The King Who Came to Breakfast" for Nabisco, 1948. A film about the history of wheat.	Needs to be rehoused in a pest-free box to prevent further damage from larvae.
1982.3.31	Bobby Sox marionette	Female marionette in burgundy velvet cape with fur lining and fur muff. From "The King Who Came to Breakfast" for Nabisco, 1948. A film about the history of wheat. The detail work on this piece is great, see photos of interior of velvet cloak. Fur lining is full of black carpet beetle larvae.	Fabric needs to be thoroughly brushed with a lint roller or vacuumed with a screen to remove fur shedding. Marionette does need to have the hands/wrists fixed unless it is put on display. Needs to be rehoused with other items having fur, in a pest-free box.
1982.2.13	Fruit	Peach marionette from "The King Who Came to Breakfast" for Nabisco, 1948. A film about the history of wheat.	Re-attach leaf. Rehouse in a pest-free box.
1982.2.16	Tooth	Marionette in yellow suit with a tooth on it's head. From "The King Who Came to Breakfast" for Nabisco, 1948. A film about the history of wheat. Yellow suit is damaged from black carpet beetle infestation.	Due to small holes in the fabric, this needs to be rehoused in a pest-free environment to prevent further damage.
1981.2.1	Hidden Hunger	Blue, ghost-like marionette From "The King Who Came to Breakfast" for Nabisco, 1948. A	Needs to be brushed with a lint brush or vacuumed with a screen.

		film about the history of wheat.	Needs to be rehoused to prevent further pest infestation.
1982.2.11	King Wheat	King marionette in purple velvet robe with fur lining, red shoes, and gold crown. From "The King Who Came to Breakfast" for Nabisco, 1948. A film about the history of wheat. The film included over 800 prints and was shown in schools and on TV.	Remove bugs from the fabric and fur lining. Freeze for 2 weeks. Rehouse in a new box. *Aside from pest infestation, the marionette is in very good shape for display.
1982.43.12	Matron	Cricket-looking marionette from "Gardening is Fun", 1944. Marionette has blue claws, yellow feet and is wearing a vest.	n/a
1982.2.42	Potato Bug	Wooden bug marionette in turtleneck, vest, and top hat. From "Gardening is Fun", 1944.	n/a
1982.2.47	Haasenpusz	Marionette of man in brown overcoat and striped bowtie, holding harmonica. From "The Whistling Women".	n/a
1982.4.66	Giraffe marionette (male)	Yellow/orange marionette wearing blue baseball cap. From 'Giraffe Bread' TV commercial.	Hat and collar should be stabilized so pins can be removed. Manipulator needs to be untangled.
1982.4.65	Giraffe marionette (female)	Yellow/orange marionette from 'Giraffe Bread' TV commercial.	Manipulator needs to be untangled.
1985.1.9	Goldilocks	Blond woman in blue dress with pink striped apron.	Vacuum with a screen. Repair seams (apron & right arm) and remove pins. *Don't freeze, this will worsen the crazing on the face.
1985.1.10	Mama Dog	Red dog hand puppet with a gingham shirt, white collar, white gloves, and green hat.	Remove extra pins. Vacuum with a screen
1982.3.12 a-f	6 spiders	6 spiders from "The Whistling Wiz" a ½ hour color movie, 1960.	Untangle strings from limbs. Freeze spiders and rehouse by themselves.
1983.3.12	Dog in brown coat	Dog hand puppet for Hartz Mountain commercial, 1981, for a reflecting flea and tick collar. Dog is wearing big brown overcoat with a red and white gingham shirt.	Vacuum with a screen. Remove extra pins stuck in the clothing that were inserted for previous display.
1985.1.27	Bull Dog (Hartz)	Wooden bull dog marionette in boxing ensemble. From Hartz	Rehouse in a pest free box.

		Mountain commercial.	Take out extra pins stuck in the marionette. Finish attaching shorts to the shirt. Brush with a lint brush.
1981.2.10	Hartz Cat	Hand puppet with faux fur body and painted rubber head, 1972.	Vacuum with a screen being particularly careful not to approach the face which is extremely fragile. Stabilize seam coming undone in the back.
1983.3.13	Blue Hartz Cat	Blue cat hand puppet wearing a blue overcoat with fur lining. From Hartz Mountain commercial, 1981, for reflecting flea and tick collar.	Needs to be brushed with a lint roller to pick up the fur that is shedding on the coat. Needs to be rehoused.
1982.4.32	Lemon Morgan	Marionette from "Wee Cooper of Fife", 1945. Female with black hair, head scarf, long robe, and straw shoes.	Vacuum with a screen. Freeze for 2 weeks. Fix limbs. Rehouse.
1982.4.58	Hill Man	Marionette from the CBS-TV morning show. Lanky man in overalls, red shirt, and long black beard.	Vacuum with a screen. Reattach torso to lower half of body. Rehouse in a bug free box.
1982.2.41	1 of "Three Little Men" marionettes	Bald man with a moustache and a tails tuxedo. From the Atlantic Refining Co. (headquartered in Philadelphia) road shows, 1938-41. Comes with original bag.	Needs rehousing.
1982.3.26a-c	Birds (1-3)	3 yellow birds from "Life" show. All are rod puppets.	Need to be wrapped individually in storage. Rehouse.
1982.2.2	Sailor	Sailor marionette in striped shirt and sailor hat. Created for Radio City Music Hall's "Surprise Box" by Villa Lobos. Hunter College NYC with Tommy Sherman's Little Orchestra and the dancer Sono Osato. 1941.	Vacuum with a screen.  Rehouse.
1982.2.36	Male red head	Red haired man in a hounds tooth suit, blue shirt, and red tie. Made for a series of films for the US Social Security Administration, 1973.	Vacuum with a screen.  Rehouse
1982.2.35	Widow	Elderly woman with hooked nose, purple cloak, and grey hair. Made for a series of films for the US Social Security Administration, 1973.	Vacuum with a screen.  Re-attach tuft of hair.  Rehouse

1982.2.34	Purple	Large, stuffed marionette with purple yarn hair and sequins on ensemble. Reminiscent of the band 'Kiss'. From children's educational special, 1977.	Vacuum with a screen (particularly the hair).  Re-attach sequins (only for display purposes).
1982.2.23	Knight of Hand	Knight in full armor from "Party Lines", a commercial commissioned by AT&T because of the need for courtesy on phone party lines. 1946.	The holes in the sweater require stabilization/darning.  Vacuum with a screen.
1982.2.24	Knight of Foot	Knight in full armor from "Party Lines", a commercial commissioned by AT&T because of the need for courtesy on phone party lines. 1946.	The holes in the sweater require stabilization/darning.  Vacuum with a screen.
1982.3.20	Always Listen	Marionette of red-haired boy with an extra-large right hand. From "Adventures in Telezonia".	n/a
1982.2.31	Lady Graybangs	Hand puppet of older woman in peasant dress with a red plaid headscarf. From "Parlons Francais".	The string unraveling along the waistline should be stabilized. The entire piece needs to be rotated in storage or display to prevent damaging creasing to the skirt. The skirt is deceptively small, the fine pleating at the waist hides it's wide width, but it should be opened up in full from time to time.
1982.2.28	Wildroot Charlie (Before)	Hand puppet of young man in a plaid jacket, blue bowtie, with a shaggy black mane. From Wildroot commercial.	Re-attach hand.
1982.2.29	Wildroot Charlie (after)	Hand puppet of young man in plaid jacket, blue bowtie, with a smooth, black coif. From Wildroot commercial.	n/a
1982.2.30	Villain	Hand puppet of a man with a blue suit, moustache, and top hat. From Wildroot commercial.	n/a
1982.3.7	Soprano Poodle	Well-endowed female poodle marionette in blue ball gown. From 'Flahooley'.	Vacuum with a screen. *Check frequently, high risk of pest invasion.
1982.3.10	Flahooley Girl	Girl puppet/doll in patriotic dress.	Bells on dress should be wrapped in unbleached muslin to prevent staining in storage.
1982.3.9	Truck Driver Jimmy	Torso of male marionette with poor boy cap and green striped	n/a *Missing left hand.

		sweater. From Shell Road Show, 1937-39	
192.4.14	Piglet	Piglet marionette, yellow painted wood face, fabric torso, and limbs. From 'Winnie the Pooh'.	n/a
1982.4.17	Bath Piglet, 3 outfits for a hand puppet	3 Piglet outfits for a hand puppet. Yellow velvet arms, green wide wale corduroy torso, black flannel arm covering.	Vacuum with a screen.
1982.4.6	Groundhog	Black and grey groundhog hand puppet from 'Winnie the Pooh'.	Stabilize large tear in black fabric arm covering.
1982.4.7	Groundhog	Black and grey groundhog hand puppet from 'Winnie the Pooh'.	Seams in the legs and feet require stabilization.
1982.2.48	Captain Scorn	Male puppet with black moustache, red jacket, and red leather boots.	n/a
1982.4.45	Flop over witch/virgin	Reversible marionette, top is a witch, bottom is a virgin.	n/a
1982.4.98 and 103	Brown spider, wooden face	Brown spider marionette, wooden face and feather legs. From 'Babes in Toyland'	n/a
1982.4.112	Deliverance Chicken	Yellow and white chicken puppet	n/a *missing manipulator.
1982.4.13	Pooh Bear	Rod puppet of Winnie the Pooh	Store puppet to prevent creasing in the arms. Fabric is becoming brittle and needs to be stored in a very long box due to the metal poles/extensions in arms.
1982.2.52	Roo (pocket)	Baby Kangaroo hand puppet that sits in the pouch of Kanga (accession #: 1981.2.15). From 'Winnie the Pooh'.	n/a
1981.2.15	Kanga	Kangaroo marionette with baby (baby kangaroo is accession #: 1982.2.52) in front pouch. From 'Winnie the Pooh'.	Stabilize seam up the center of the neck and in the right arm scye. Stabilize stomach seams where the cotton batting is coming loose. Store to prevent creasing.
1982.2.43	Paw	Older man in denim overalls with painted limbs. From "Life with Snarky Parker".	n/a
1985.1.12	Santa Clyde	Santa marionette in a red velvet suit with black boots. From NBC.	n/a
1982.4.8	Pooh Bear	Winnie the Pooh Marionette	n/a
1982.2.3	Champy the Lion	Lion marionette used as principal figure in series (48) of	Vacuum with a screen

		Borden commercials. He also appeared on the "Mickey Mouse Club" and in a Wheaties commercial.	
1982.2.22	Von Chairshaker the Lion Tamer	Male marionette in red double-breasted jacket, green jodhpurs, and red boots. Note from Bill Baird reads "For 'vaudeville', worked with first Charlemagne (4 legs). Lion scares pants off tamer."	Possibly replace missing hooks on the jodhpurs if ever put on display.
1985.1.24	Caroller	Male marionette in brown velveteen jacket, grey top hat, and rose colored shoes. From CBS-TV Christmas special, 1962.	n/a
1985.1.25	Caroller	Male marionette in brown long coat, pink top hat, and mittens. From CBS-TV Christmas special, 1962.	n/a
1985.1.26	Charleston Girl	Tall female marionette in a cream sweater and plaid skirt with yellow hair. From CBS-TV Morning Show	Protruding metal components in the feet/ankles pose a threat to the other items in storage. Wrap protruding metal wires in unbleached muslin during storage.
1982.5.30	Red Rhumba	Nearly nude female marionette in small, fringe underwear. She has red hair. From nightclub act, 1933.	Replace string holding arms in place. The string that runs through the shoulders has snapped.
1985.1.19	Princess	Princess hand puppet with long yellow braided pigtails, crown/veil, and silver gown.	n/a
1985.14 a,b	Jello Indian and Papoose	Female Native American marionette in a leather dress with a baby attached to her back. Baby has a feather headdress. From Jello print commercial, 1950.	n/a
1985.1.13	Jello Cowboy	Cowboy rod puppet in pink shirt, blue jeans, and a life size blue cowboy hat. Puppet has a large oblong shaped head. From Jello print commercial, 1969.	n/a
1982.5.35	Molebaby	Blue mole marionette in lime green vest with green hat and badge/pin. From "Life with Snarky Parker", CBS-TV, 1950.	Vacuum with a screen.
1982.5.34	Mole King	Blue mole marionette in yellow vest with an unattached crown of	Vacuum with a screen.

		gold painted cardboard and green velvet. From "Life with Snarky Parker", CBS-TV, 1950.	
1982.5.32	Moleman	Blue mole marionette in yellow vest with a badge/pin. From "Life with Snarky Parker", CBS-TV, 1950.	Repair loose seam on the bottom of the torso. Vacuum with a screen.
1982.5.33	Molewoman	Blue mole marionette in yellow vest. From "Life with Snarky Parker", CBS-TV, 1950.	Gently vacuum with a screen.
1982.3.29 a-h	Population Explosion Babies (1-8)	Baby hand puppets (8) from "People is the thing that the World is Fullest of" a musical review for adults, presented at the Baird Theater, February 1967.	Remove stains/water damage?
1981.2.8	Celeste	Female marionette in plaid dress with black hair and a straw hat with fruit. Inspired by a trip Bil and Cora took to Puerto Rico.	Stabilize holes in the dress. The holes were intentionally inserted for the strings however they have grown with age and use.
1981.2.12	Felice	Ballerina marionette in blue tutu with blue hair. Note from Bil Baird reads "From Radio City Music Hall Christmas Show, early 1940's, sculpted for 6,000 seat house. Operated on 21 ft. strings. She worked with the solder and the clown and she fell for the soldier.	Store the tutu with plenty of padding and rotate to maintain structural integrity of the marionette.
1982.4.30	Brunhilde	Female chicken marionette meant to resemble the fictional Brunhilde. She wears a gold medieval chest plate with matching gold shield and spear. From Broadway show, 'Flahooley', 1951.	Stabilize head, the spray foam he used is coming loose with age. Clean off black corrosion on the chest. Possibly repair stains/discoloration on the skirt. Can anything be done for the foil layer that is peeling back?
1982.3.21	Merchandise manager	Male marionette in beige suit, wool crepe pants, velveteen jacket, yellow vest, yellow shoes, and blue shirt. From NYT Fashion Show.	n/a
1982.3.44	Butler	Green rooster rod puppet in green striped shirt. From "The Pecking Order" segment of "People is the Thing the World is Fullest Of", 1967.	n/a

1982.4.636	Reindeer	Large white reindeer marionette with blue hooves. From "Flahooley" on Broadway, 1951.	Stabilize seam in the neck.  Wrap bells in unbleached muslin in future storage.
1982.3.32	Adventurer	Male marionette in armor and trunk hose with a hat and feathers. From "Magic Box" Villa Lobos show performed at Hunter College	Re-house to prevent further insect damage.
1982.4.47	Robert Morse	Man in yellow cape with blue turtleneck and brown pants. Hand puppet with small manipulator, from the Robert Morse, T.V. show.	Rehouse to prevent further insect damage.  Vacuum with a screen
1982.3.33	Comptroller	Man in blue suit with yellow hands and blue feet. From NYT Fashion Show.	Tighten rope holding torso to legs. Vacuum with a screen.
1982.2.45	Scientist	Man in asymmetrical jacket with gold buttons, blue pants and black shoes. He previously wore tortoise shell glasses but they are broken down the center.	n/a
1981.2.3	Paraguay	Gauche dancer marionette in yellow shirt, blue vest, and purple neck scarf. Used on The CBS Morning Show, 1956. Handwritten note from Bil Baird accompanying the marionette reads, "Listed as a performer on the CBS Morning Show, 1956. Used twice on network T.V. The head- a standard shape- was used on many morning show figures. The special tap dancing feet were operated from below the stage floor against the pull of elastic knee strings, not at present on the figure. NOTE: Hang hand strings back over head bar for best position."	Re-attach hand if putting on display.
1982.2.86	Soldiers (3)	Three-part marionette of soldiers all in blue wool pants. From "Art Carney Meets the Sorcerer's Apprentice" marionettes.	Need to untangle the strings to avoid compromising the structure of the triad marionette.  Needs to be rehoused in a bigger box, as soon as possible. Structural integrity of the marionette is compromised in the box.

			Lint roll the pants to remove layer of dust.
1982.2.6	Sheriff	Western Cowboy marionette with fur vest, leather gun holster, long white mustache, and star badge. From "A Boy and His Cow".	Brush off corrosion. Possibly remove stains on the leather. House with other items having fur.
1982.4.25	O'Toolova	Ballerina marionette in blue top and tutu. From the Bil Baird Show, 1953, CBS-TV 1953.	n/a
1985.1.23	Fox	Red fox hand puppet wearing a blue striped cravat. This was an early experiment, 1940.	Vacuum with a screen.
1982.4.5	Austrian Swiss Cheese	Hand puppet with Swiss Cheese torso and green and burgundy velveteen limbs. Puppet is wearing a green hat of self fabric and carrying a mountain climbing pick ax. For a commercial for Austrian Swiss Cheese, 1970.	Should be housed with unbleached muslin instead of tissue paper because the tissue paper sticks to the paint/rubber/plastic surface.
1985.1.16	Daughter, from Splitlevel family	Female rod puppet in green velveteen skirt and orange scarf. She has yellow hair and blue eyes. From the 'Splitlevel Family', part of the "Home Show" with Hugh Downs and Arlene Francis, CBS-TV 1955.	n/a
1985.1.5	Mama, from Splitlevel family	Female rod puppet in print dress with orange scarf. . From the 'Splitlevel Family', part of the "Home Show" with Hugh Downs and Arlene Francis, CBS-TV 1955.	Vacuum with a screen.  Possibly clean hair.
1985.1.17	Boy, from Splitlevel family	Boy rod puppet in striped shirt and blue jeans. . From the 'Splitlevel Family', part of the "Home Show" with Hugh Downs and Arlene Francis, CBS-TV 1955.	Repair seam coming loose in the knit turtleneck. A light handed basting stitch was used to sew the neck together and it requires stabilization.
1985.1.32	Boojum	Male marionette in black suit with checkered vest. Played the villain in "A Monacle Built for Two" by Alex King, performed at the Waldorf Astoria Perro Keet room. Commissioned by Clare Boothe Luce on the occasion of the presidential election when Thomas E. Dewey didn't get elected and Harry S. Truman did, 1948.	Needs to be lint rolled.

1982.2.38	Bear	Sloth-like marionette of wood and textiles. From Wheaties commercial, 1948.	Vacuum with a screen.
1985.1.11	Cerebral Palsy	Wooden boy marionette in blue shorts and red striped shirt, from award-winning commercial, 1972.	Needs to be lint rolled.
1982.2.38	Bear	Brown bear hand puppet.	n/a
1983.3.14	Bugler	Male hand puppet in blue shirt with matching blue hat, yellow yarn hair and yellow cape. He is holding a large gold bugle. From Busch Garden's 1979.	Possibly clean fabric?  Re-house to allow the torso to return to its original shape.  No recommendation for the hair.
1983.3.1-8	Chorus Girls (1-8)	Set of 8 female rod puppets, all chorus-line dancers with blond yarn hair and green dresses. Made for Bush Gardens, 1979.	Vacuum with a screen.  Rehouse in bigger boxes with less puppets/box. Possibly remove stains on the skirting. Wrap individually with tissue paper to prevent hair tangling.
1983.3.9	Busch King	Male marionette in purple robe with fur lining, red jacquard pants, gold jewelry and crown. From Busch Gardens, 1979.	Needs to be rehoused in extra-large box. Re-attach bottom portion of left arm to the upper arm (not the whole arm, just the portion that was sewn originally) Stabilize abrasion on red pants (right leg, inside). Stabilize seams in the wrists. Vacuum with a screen. Freeze for 2 weeks before rehousing. Remove stains from dust and metal necklace. Store with unbleached muslin wrapping the metal necklace. The marionette has altered shape due to compression in store. <b>NOT STABLE ENOUGH FOR DISPLAY.</b>
1982.4.4	Alphonse	Male marionette with mustache, white painters shirt, black velvet	Possibly remove stains on the shirt.

		pants, black crepe scarf and black beret. He is wearing a wooden sign- the front reads "It's nice inside" and the back reads "Once upon a Dragon". From Busch Gardens, 1979.	Either re-attach hat or safely remove it and take out pins.
1982.2.1	Singer	Wooden marionette of a man in a yellow suit with green velveteen vest black cravat, with white hanker chief.	n/a
1982.4.61	Box Flop	Female rod puppet with a gaping jaw. She is wearing a velvet dress with applique neckline and trim and a blue hat with red feathers.	Vacuum with a screen.
1982.2.17	Pop	Male marionette in a white knit suit, gold velveteen jacket with white fur trim, and matching blue/green shoes and hat. From "Adventures in Telezonia", 1947. Marionette is housed wrapped in the original bag.	Reattach right foot, hand, and hat if ever used on display.  Rehouse to prevent further insect damage.
1982.4.26	Aqua Worker	Marionette in blue knit ensemble from "Adventures in Telezonia", 1947.	n/a
1980.5.18	Alligator	Green alligator hand puppet from "Punch and Judy" 1925.	n/a
1980.5.14	Elephant	Grey elephant rod puppet with a covering adorned with bells.	Stabilize fabric at the top of the ears.
1982.2.49	Prince	Prince marionette in trunk hose and green velvet cape and corduroy hat with a feather. From an article on how to produce "The Frog Prince" in Women's Day, 1950.	Coat the shoes to prevent further loss? Leather shoes are losing their coating and posing a threat to other items in storage.  Wrap feet separately during store to prevent stains to other items.  Reattach hat.
1982.2.50	Princess	Princess marionette in marigold velvet dress with gold crown and silk veil. From an article on how to produce "The Frog Prince" in Women's Day, 1950.	Stabilize the rip on the veil.  Reattach the crown to the head.
1985.1.8	Father Knickerbocker	Colonial inspired hand puppet in boot cuff jacket, and blue hat, with a lace ruff at the neck. Made for the city of New York, 1941.	n/a
1982.2.14	Father	Colonial inspired hand puppet in	n/a

	Knickerbocker	boot cuff jacket, and blue hat, with a lace ruff at the neck. Made for the city of New York, 1941.	*The color is much better on this one, it was stored in the original bag.
1985.1.28	Feminist	Rubber/foam hand puppet in military drab clothing with brown yarn hair and glasses. From a Mounds Candy Commercial, 1972.	Vacuum with a screen.
1985.1.29	Playboy	Male hand puppet in tweed jacket with a green cravat. From a Mounds Candy Commercial, 1972.	n/a
1985.1.30	Airline pilot	Pilot marionette in blue suit with gold embellishments and epaulets, and a pink neck scarf.	n/a * In a very stable condition with very little color loss.
1985.1.31	Devil	Devil hand puppet with green face and red cape. From a Mounds Candy Commercial, 1972.	n/a
1982.3.39	Early marionette	Marionette in linen pants, black velvet coat, silk vest, and chiffon scarf. Resembles George Washington. Created by Bil Baird when he was very young, in 1918.	n/a *Marionette is very old and fragile, but is beyond repair. Needs to be housed very carefully.
1982.3.36	Early marionette	Gypsy marionette in orange and silver dress with gold bangles and hand carved black high heels. Created by Bil Baird when he was very young, in 1918.	n/a *Marionette is very old and fragile, but is beyond repair. Needs to be housed very carefully.
1982.3.38	Early marionette	Lanky marionette in black clothing with orange satin sash and scarf. Created by Bil Baird when he was very young, in 1918.	n/a *Marionette is very old and fragile, but is beyond repair. Needs to be housed very carefully.
1982.3.37	Early marionette	Marionette in yellow pants, checked shirt, with red grosgrain sash and hat. Created by Bil Baird when he was very young, in 1918.	n/a *Marionette is very old and fragile, but is beyond repair. Needs to be housed very carefully.
1982.3.41	Early marionette	Marionette in purple silk with floral silk shirt. Created by Bil Baird when he was very young, in 1918.	n/a *Marionette is very old and fragile, but is beyond repair. Needs to be housed very carefully.
1982.4.59	Princess Yummy	Princess marionette in a long white gown with a wide skirt, gold belt, gold crown and long braids. From the "Philadelphia	n/a

		Road Show”, 1945.	
1982.4.31	Abu	Male marionette in Middle Eastern dress—red velveteen wide pants, purple sash, small black vest, and white turban. From the “Philadelphia Road Show”, 1945.	Vacuum with a screen.
--	Maid	Maid hand puppet with a rubber head, black dress, white collar, apron, and felt hands. From Drano Commercial. (No accsn. Number)	n/a
1982.2.19	Russian/Georgian Puppet	Georgian rod puppet of a man in a long black robe with gold embellishments, red velvet pants and a black hat. The mustache appears to be made of human hair and the hands are weighted. From the Georgian Puppet Company, Tbilisi, Russia. This was a gift to Bil Baird during a 1963 US State Department Tour.	n/a
1982.2.63-72	Can Can Dancers (1-9)	Leg marionettes with full skirt of white muslin with grosgrain ribbon embellishments. Marionettes are made of just the lower part of the body (legs, feet, and hands holding the skirt). 1941.	Possibly remove stains.  Rehouse in a bigger box with less marionettes/box.
1982.4.51	Girl	Small bug-like marionette in a blue bikini with blue wings and red hair. From “Honey and the Horn”, CBS-TV morning show, 1954.	n/a
1982.4.113	Piccolo Worm	Snake-like rod puppet with wooden head. Blue body with brown hair. From CBS-TV morning show, 1954.	Stabilize black spots to remove pins.
1982.4.11	Chicken	Chicken marionette from Sid Caesar’s “Show of Shows”.	n/a
1982.2.26	Tota Ram	Male marionette in Indian ensemble. Indian interpreter from India tour, 1962. Tour included Afghanistan and Nepal.	n/a
1982.4.97	William Gaxton	Man in black striped shirt and striped bowler hat. From “Nellie Bly”, 1945.	n/a
1982.4.107	Victor Moore	Man in striped t-shirt with painted striped hat. From “Nellie Bly”, 1945.	n/a
1982.4.106	Benay Venuta	Woman in striped t-shirt with	n/a

		white velvet hat with big black feather. From "Nellie Bly", 1945.	
1985.1.7	Prince	Large foam hand puppet of a prince in blue velvet cape and red hat. From "Cartonella: a Milk Carton Extravaganza", 1972. A film about the importance of milk.	Repair seam at the bottom of the cape. Remove velvet pile from face. Rehouse in a bigger box.
1982.4.19	Cartonella	Large hand puppet of a female cow wearing a green paisley shawl. From "Cartonella: A Milk Caron Extravaganza", 1972. A film about the importance of milk. Cartonella was a fortune telling cow who was so popular Bil Baird had to make an enormous version of her for the Macy's Thanksgiving Day Parade.	n/a
1985.1.21	Saci Pereré	Little boy marionette in yellow ensemble with a red hat. This is noted as a Brazilian folk figure. From "The Magic Onion", 1962 in which Bil Baird worked with Sono Osato and the Little Orchestra, Hunter College.	n/a
1982.2.8	King Rutabaga	King marionette in flowing orange velveteen robes with gold necklace and jewels at the neck. From "Life with Snarky Parker", CBS-TV series, 1950.	n/a
1985.1.18	King	King rod puppet in gold and jacquard robe. From "The Indian Onion", a spin-off from "The Magic Onion".	Rehouse to prevent further pest damage.
1985.1.20	Merlin	Wizard hand puppet in blue velvet robe with matching hat, long grey beard, and gold painted magic wand. From "The Magic Onion", 1962 in which Bil Baird worked with Sono Osato and the Little Orchestra, Hunter College.	Rehouse to prevent further pest damage.
--	Unknown Elf Man	Elf man marionette in a green suit with a flute. He resembles a leprechaun and appears to be one of Bil Baird's older marionettes. There is no accession #.	Reattach torso and legs if ever using for display.  Wrap feet in muslin or tissue to prevent damage to other items in storage. There are sharp pins protruding in the feet.

1979.5	Cloon	Older male marionette with a long white beard, tall green hat, pink corduroy jacket, jacquard vest, beige velvet pants and pink painted shoes. From "O'Halloran's Luck", a TV series with Art Carney.	Fix black tape on the shoe that is holding metal rod in place.
1982.4.28	Rhinoceros	Large rhinoceros in grey ensemble with lace embellished collar.	Remove stains? Rehouse to prevent further pest damage.
1985.1.6	Koala Bear	Brown koala bear marionette from Zee bathroom tissue commercial, 1964.	n/a
1985.1.5	Poodle	Grey poodle with yellow yarn fur, from "Cotton Council Commercial", 1973.	n/a
1985.1.4	Dolly	Red-headed doll marionette in striped tights. From "Cotton Council" Commercial, 1973.	n/a
1984.4.31	Angus	Scottish bloke in kilt, velvet jacket, velveteen red vest, and ruffed collar. He is carrying a wooden cane.	Vacuum with a screen. Wrap metal components in unbleached muslin for storage. Possibly repair discoloration on white ruff.
1982.3.8	Tibby Cat	Cat marionette in red doublet with blue boots, metal brooch, and velvet hat. From "Flahooley", 1951.	Stabilize seams on the hat.
1983.3.1	Jack	Jester rod puppet in symmetrical turquoise and marigold suit with red shoes, and big black glasses. From Busch Gardens, 1979.	Stabilize loosening seams in the hat.
1982.4.10	Rabbit	Purple stuffed hand puppet with rabbit head on a rod. From "Leda had a Little Swan"	n/a
<b>Costumes by Edith Hiller Parsons</b>			
1982.2.91	Female blue and purple bodice	Blue and purple bodice with blue leg of mutton sleeves and purple torso. Worn by Little Bo Peep in "Babes in Toyland", NBC Special, 1954.	n/a
1982.2.90	Female striped dress costume	Yellow top, marigold felt hands, purple skirt. Costume worn by female puppet with purple skirt, striped blouse, and separate striped jacket. For the CBS	The neck ruff requires stabilization. As do the seams in the matching over-jacket. Vacuum with a screen.

		Home show.	
1982.2.89	Mens Tweed Jacket	Brown tweed blazer with two plastic buttons and a tag inside that reads "Elisabeth Hooker Parsons" used in a U.S. Steel Commercial. Pleats gathered in the back.	n/a
1982.2.92	Mens short shirt and leather jacket	Mans shirt and leather jacket (zippered). Used in "Party Lines" an AT&T educational film about the need for politeness on party lines, 1946.	n/a
1982.2.93	Cooper's Wife costume	Purple satin ball gown with lace around the wide neck and sleeves. Princess seams in the bodice.	Remove extra pins. Vacuum with a screen.
1982.2.88	Female hand puppet costume	Lady's striped dress of brown, yellow, white, and green.	Remove extra pins. Vacuum with a screen.
1982.2.95	Female plaid coat and skirt	Female plaid coat and a-line skirt (secured inside coat with a pin). Used in a fashion show for Foerstman Wood.	Remove extra pins. Vacuum with a screen.
1982.2.94	Long, yellow coat dress	Long yellow coat-dress with brown trim and brass buttons. Worn by Butterbelle in "Life with Snarky Parker" series on CBS-TV 1950.	Remove extra pins. Vacuum with a screen.
1982.2.96	Female jacket	Womens tweed jacket with red ubttons for Fashion Show with Foerstman Wood.	n/a
1982.2.98	Male sweater	Long-sleeved red knit sweater with "MLPF&B" in yellow letters across the chest. There is a confusing note which indicates it was used in an 'industrial' for Merrill Lynch.	Remove extra pins. Vacuum with a screen.
1982.2.97	Sea green mermaid-like costume	Sea green costume with silver embellishments, uneven hemline, and large sequins adorning the billowing sleeves. Reminiscent of a mermaid.	n/a
--	Sound of Music extra costumes	From box AA: 2 green skirts with aprons; 5 red vests (2 knit, 2 velveteen); 1 blue shawl; 1 blue and white striped skirt with matching bodice; 3 red wide-brim hats; 1 purple wide-brim hat; 2 green hats (different styles), 1 red velvet cap; a pile of fabric remnants.	n/a
1982.2.99	Extra Sound of Music Skirt	From box C (with other E. Parsons costumes): Green skirt	Remove extra pins.

		with white apron. Made for the “Lonely Goatherd” number in the Sound of Music, 20 <sup>th</sup> Century Fox, 1965.	Vacuum with a screen.
<b>Puppets from Bil Baird’s personal collection</b>			
1980.3.4	Beefeater Jacket for marionettes by Tony Sarg	Red velvet jacket with metallic thread embellishments. White satin lining with chiffon sleeves. *Made by Tony Sarg for “The Rose and the Ring”. Goes with 2 different wooden heads, one with blue eyes and one with brown.	Vacuum with a screen. Jacket should be wrapped unto itself in storage. Unbleached muslin should be inserted to prevent further staining from metal buttons and metallic thread.
1983.3.16	Caricature of a Young Bil Baird	Hand puppet of a young man (Bil Baird) in tweed pants, woven jacket, and wooden face and limbs. *Made by Lou Bunin	n/a
1980.3.12	Dancing Pair	2 dancers, 1 male and 1 female in shorts, tights, and blouses. Both have human hair and life-like marble eyes. From the Salici Company in Rome, Italy.	Store all metal components wrapped in unbleached muslin. Insect damage? Dirt stains? Human hair?
1980.5.16	Witch marionette made by Caroline and Otto Kunze	Witch marionette in black silk crepe robes, with wooden cane and plastic hair. Made in Germany, 1935.	Stabilize shoulder seams. Allow plenty of room I storage for ratiné hair. Repair moisture damage on right arm.
1983.3.17	Farmer pig hand puppet by Caroline and Otto Kunze	Pig hand puppet in green corduroy overalls.	n/a
1980.5.13	Singer marionette by Caroline and Otto Kunze	Singer marionette in violet empire waist dress, from Switzerland.	Stabilize the chiffon ruffles. Wrap hair during storage and give it plenty of space to avoid agitation and prevent further losses. The hair is made of a type of parchment that is flaking away.
1982.3.13	Owl marionette by Caroline and Otto Kunze	Large wooden owl marionette in a brown suit with yellow rick rack embellishments on the torso. From “Bank Show”, 1959.	Repair left shoulder seam which is coming loose.
1982.3.17	Mephistopholes marionette by Caroline and Otto Kunze	Mephistopholes marionette in green ensemble with brown ribbon.	n/a
1982.3.18	Marguerite	Margeurite marionette, a woman	n/a

	marionette by Caroline and Otto Kunze	with long blond braids in a long blue dress.	
1980.3.23	Girl hand puppet by Caroline and Otto Kunze	Blond girl hand puppet in blue dress with pearl bead embellishments.	n/a
1980.3.24	Pirate hand puppet by Caroline and Otto Kunze	Pirate hand puppet in black corduroy pants, green shirt, and black hat.	Rehouse to prevent pest damage.
1980.3.22	Sailor hand puppet by Caroline and Otto Kunze	Sailor hand puppet in red and white striped shirt with white hat.	n/a
1982.4.42	Small Boxer made by Tony Sarg	Boxer with satin shorts, red boxing gloves, green leather shoes, and a black mustache. From "Bohemia Restaurant Act", 1931.	Needs to be stretched out and supported within the box.
1982.4.96	Big boxer made by Tony Sarg	Boxer with satin shorts, red boxing gloves, green leather shoes, and a black mustache. From "Bohemia Restaurant Act", 1931.	Needs to be stretched out and supported within the box.
1982.2.27	Helen of Troy marionette by Tony Sarg	Wooden female marionette in bikini top and bottom with beaded jewelry, fringe, armlets, and headband. Carved by Mat Searle for "Faustus".	The string holding the shoulders together needs to be repaired. Needs to be housed with metal components wrapped in unbleached muslin. Stabilize right hand before it falls off.

## APPENDIX B

## Conservation Assessment for Puppets on Display

\*Highlighting indicates pest infestation

Accession Number	Description	Notes	Conservation
1982.4.46	Lady Tango	Female Rod puppet with a bolt for a head. She is wearing a green dress. Used in Chrysler display at World's Fair, NYC.	Green dress requires stabilization.
1982.4.95	Armando and Maxine	Man in tuxedo and woman in blue gown ballroom dancing. 1 marionette.	Clean feathers and check frequently for pest infestation. The feathers pose a higher risk.
1981.2.18	Tigger	Yellow and black tiger marionette from 'Winnie the Pooh'.	Needs dusting.
1981.2.13	Rabbit	Upright, brown rabbit marionette from 'Winnie the Pooh'.	n/a
1981.2.7	Christopher Robin	Hand-painted wooden marionette of young boy from 'Winnie the Pooh'. The marionette is wearing handmade clothing and has yellow yarn hair.	Needs dusting.
1981.2.16-17	2 Turtle doves	Purple, yellow, and orange turtle dove hand puppets from 'Winnie the Pooh'.	n/a
1981.2.6	Piglet	Small pig marionette made of corduroy, velvet, and wood. From 'Winnie the Pooh'.	Stabilize ears. Needs dusting.
1981.2.14	Happy Pooh	Winnie the Pooh marionette	Needs dusting.
1982.2.53	Roo	Baby kangaroo marionette, all fabric-fully articulated, which rests in Kanga's (accession #1981.2.15) pouch. From 'Winnie the Pooh'.	Stabilize the button eyes. Needs dusting.
1981.2.15	Kanga	Brown kangaroo marionette with large pouch for Roo (accession #1982.2.53). From 'Winnie the Pooh'.	n/a
1982.2.5	Owl	Brown and white owl marionette with wood face and talons. From 'Winnie the Pooh'.	n/a
1981.2.4	Eeyore	Donkey marionette with pink fur and blue eyes, from 'Winnie the Pooh'.	Needs dusting.
1997.2.	Monkey	Monkey hand puppet given to Andy Egloff by Bil Baird. Andy	n/a

		Egloff was a child with a learning disability and Bil Baird knew Andy through Andy's father who was the doctor of Bil's mother. Bil gave the puppet to Andy in the 1940's.	
1985.1.35	Wise Man	Hand puppet of older man with a turban, grey beard, and paid tunic. From 'World Education' 1982.	n/a
1985.1.33	Rich Man	Hand puppet of man in white tunic with matching white hat. From 'World Education' 1982.	n/a
1985.1.37	Policeman	Hand puppet of a man in a police uniform. From 'World Education' 1982.	Stabilize/repair the small hole in the seam of the left hand.
1982.3.28	Yellow Bird	Large marionette of a yellow bird from "Rain Forest", 1976.	n/a
1982.2.61	King of Carnival	Large marionette with draped gold fabric body and gold head with matching king's crown and beard. From 'Surprise Box', 1952.	Reattach portion of moustache that is coming loose.
1982.2.62	Queen of Carnival	Large marionette with draped gold fabric body and gold head with matching crown, reminiscent of the queen in a game of chess. From 'Surprise Box', 1952.	n/a
1982.2.59	Bull	Large marionette with draped metallic red and gold fabric body and gold head with bull horns. From 'Surprise Box', 1952.	n/a
1982.2.60	Matador of Carnival	Large marionette with draped gold fabric body and gold head with a sword and red flag. From 'Surprise Box', 1952.	n/a
1982.2.20	Glockenspiel Player	Stuffed Glockenspiel player marionette from "Swedish Rhapsody" segment on The Morning Show, CBS-TV, 1954.	Vacuum with a screen. Stabilize holes in sock in right leg. Put extra hat back on the 'Boy' marionette in the same series (accession # 1982.2.21)
1982.2.5	Flute player	Stuffed flute player marionette from "Swedish Rhapsody" segment on The Morning Show, CBS-TV, 1954.	Vacuum with a screen. Stabilize holes in sock in right leg.
1982.2.21	Boy	Stuffed boy marionette from "Swedish Rhapsody" segment on The Morning Show, CBS-TV, 1954.	Vacuum with a screen. Stabilize holes in sock in right leg.

1982.2.25	Dancing couple	Stuffed marionette of a man and woman dancing. Both are in traditional dress. From "Swedish Rhapsody" segment on The Morning Show, CBS-TV, 1954.	n/a
1982.2.37	Racoon	Racoon marionette, brown with faux fur exterior From the CBS Morning Show, 1954.	Vacuum with a screen
1982.3.20	Always Listen	Marionette with white body and black satellite equipment on its head. From 'Adventures in Telezonia', 1947.	n/a
1982.4.24	Angel	Marionette in yellow crepe robe and holding a candle prop. From AT&T film "Party Lines", 1946.	Repair loss of paint/plaster on the top of the head.
1982.4.63	Angel	Marionette in yellow crepe robe. From AT&T film "Party Lines", 1946.	n/a
1982.4.64	Angel	Marionette in yellow crepe robe. From AT&T film "Party Lines", 1946.	n/a
1982.3.19	Party Line Piggy	Pig marionette in velvet jacket and bowler hat with a moustache drawn on. From AT&T film "Party Lines", 1946.	n/a
On loan from Bil Baird's marionettes	Heathcliff in Harem Costume	Horse marionette in a pink harem costume.	n/a
1982.2.54	Birdie	Female marionette in a plaid dress with lace trim. From CBS TV series, "Life with Snarky Parker"	Stabilize holes in the knee.
1982.5.26	Ronald Rodent	Villain marionette in long cape and top hat. From CBS-TV series "Life with Snarky Parker".	n/a
1982.5.25	Gordon the Ghost	Ghost marionette with blue painted (wood) limbs and head, and a mesh fabric body. From CBS TV series, "Life with Snarky Parker".	n/a
1982.4.48	Glinda	Witch marionette in long pink satin gown and matching pink satin hat, with long black hair. There are gold embellishments throughout. From "The Wizard of Oz", 1972.	n/a
1980.5.17	Green soldier	Lanky green marionette in full soldier suit with white sunglasses, green top hat, carrying green gun. From "The Wizard of Oz", 1972.	Vacuum with a screen. Stabilize right shoulder. Stabilize both shoulder flaps.
1980.5.11-12	Munchkins (2)	Two mid-sized marionettes in matching blue outfits, blue hats	n/a

		with white ball fringe and grey boots. From "The Wizard of Oz", 1972.	
1980.5.15	Wicked Witch of the West	Witch marionette in long blue/grey dress with a black eye patch. From "The Wizard of Oz", 1972.	n/a
1980.3.15	Scarecrow	Scarecrow marionette in blue clothing. From "The Wizard of Oz", 1972.	n/a
1980.5.1	Cowardly Lion	Large lion marionette with brown faux fur and red yarn mane. From "The Wizard of Oz", 1972.	Vacuum with a screen, especially the yarn mane and the crevices in the hairline.  Most of the seams appear to be relatively stable, this may require a second check at the time of conservation.
1982.2.10	Senator Kefauver	Male hand puppet in Davy Crockett garb, with black glasses.	n/a
1982.2.9	Senator Taft	Male hand puppet in blue jacket with rimless spectacles	Needs thorough dusting, especially on the glasses.
1982.2.40	Clark Gable	Marionette made to resemble Clark Gable, with a brown suit and painted black hair and mustache. From "Shell Road Show" 1937-38.	n/a
1981.2.11	Perry Como	Marionette made to resemble Perry Como, wearing blue pants, a light blue sweater, and yellow shirt. Used on the "Perry Como Show", 1950's.	Needs thorough dusting.
1981.2.2	Stuffsky	Lanky male marionette who appears to be an orchestra conductor. He is wearing a grey satin tails tuxedo and has a curly head of hair, 1950's.	Needs thorough dusting.
1981.2.9	Devil	Red male marionette with devil's horns and tail. He wears a red suit, red hat, and gold satin tuxedo jacket. He is a caricature of Xavier Cugat, a nightclub figure. Used with Adam and Eve and an apple tree, all of whom did the calypso. From "The Fall of Man", 1940's.	Possibly remove stains on the front shirt flap?
1982.2.4	Marilyn Maxwell	Female marionette in white dress with yellow hair. She plays Nellie Bly in "Nellie Bly", 1945.	n/a
1982.5.28	Astronaut	Astronaut marionette in white	n/a

		suit from NASA moonwalk simulation, 1971.	
1987.6.9-10	Mountain Climbers	Two identical mountain climber marionettes with green hats and large brown beards. From "The Sound of Music", 1965.	Repair center front seam for 1987.6.9.
1987.6.4	Goatherder	Male marionette wearing leiderhosen, a green cap, with blond hair. From "The Sound of Music", 1965.	n/a
1987.6.5-6	Goats (Mother and father)	Two nearly identical marionettes, mother goat has grey fur and father goat has light brown fur. From "The Sound of Music", 1965.	Vacuum with a screen. Repair seam coming undone in the neck of father goat (1987.6.6) (near the head).
1987.6.11	Maiden	Female marionette with blond hair, blue eyes, a pink striped skirt, blue bodice, and rosary around the neck. From "The Sound of Music", 1965.	n/a
1987.6.7	Goat (baby)	Baby goat marionette with light peach pile weave fur and felt legs, with a wooden head. From "The Sound of Music", 1965.	n/a
1987.6.8	Lady	Female marionette in purple bodice with matching hat and red hair. From "The Sound of Music", 1965.	n/a
1987.6.3	Bartender	Bald bartender marionette wearing a long blue apron and carrying five wooden mugs.	n/a
1987.6.5	Horn player	Rod puppet of a bald man playing his horn. From "The Sound of Music", 1965.	Clean the moisture damage on the head to prevent further paint erosion. Needs dusting.
1987.6.12	Prince	Prince rod puppet from "The Sound of Music", 1965.	n/a
1987.6.1-3	Dancing duos (3 pairs)	Three almost identical sets of marionettes featuring a man and a woman dancing. She has yellow braids and he has a green vest. From "The Sound of Music", 1965.	Stabilize the fraying braid on the left side of the woman in 1987.6.3. Needs dusting.
1982.4.49	Auntie Em	Older woman marionette in grey dress with grey bonnet. From "The Wizard of Oz", 1971-72.	n/a
1982.4.50	Toto	Small black dog marionette from "The Wizard of Oz", 1971-72.	n/a