Costumes in Star Wars: The Recreation of Rey’s Costume from The Force Awakens

Maria Hendrickson

Faculty Introduction

Dr. Tracy Bilsing

Maria’s research entails the meticulous process needed to recreate a cinema-correct Star Wars costume. Maria performed all of her research online through fan sites and discussion threads as there are no traditional resources which detail with exactitude the composition of the costume of the character Rey from Star Wars. Through her research, Maria has not only engaged the cosplay element of costume design, but she has also enriched the academic community through her detailed and thoughtful communication of her research in a field that has been vastly underrepresented.

Abstract

While many people like the idea of dressing up as their favorite film or comic-book hero, there are others who turn this idea into a reality with costuming. This process-analysis paper analyzes Rey’s Scavenger costume from the film Star Wars: The Force Awakens, examining the techniques and skills generally needed to accurately replicate a costume seen in a film. This paper focuses first on the assistance offered by online costuming communities, and the type of research needed to begin a costume, which often includes working with a limited number of references. This paper then delves into a process-analysis of the costume’s construction, from fabric types and dye, to leatherwork and aging. The costume’s wear-ability as an actual outfit is also discussed.
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The costumes of the *Star Wars* movie franchise have always been unique. From Darth Vader’s armored suit, to the elaborate dresses of Padmé, the costumes of *Star Wars* have made the story as much as anything else. Above all, however, the costumes are generally practical for the environments in which they are worn, such as the heavy coats worn on Hoth, or the desert garb of the Tusken Raiders. This attention to the environment makes these costumes interesting to study and re-create. After seeing the first Disney-produced *Star Wars* film, *The Force Awakens*, I was inspired to attempt to re-create the costume of the main protagonist, Rey (Figure 1). It seemed to be simple, but iconic, and I believed that it would give me a chance to improve my sewing, learn new skills, and end with something I could be proud of. Rey has primarily lived in the desert during her life, and her costume strongly reflects this through a use of light, thermal fabrics, and breathable layers. Interestingly, while this kind of costume replication is not unique, there is little formal documentation on the process, and much of it relies on piecing together diverse skills such as sewing, painting, and modeling. This made it imperative to document my work as I went, as I wanted a record of what techniques worked well and what I had learned.

Because of the digital nature of modern images, I had to conduct my research for this costume online, using costuming forums, screen capture websites, and photographs taken by people who saw the physical display of the costume at the Disney exhibit (“Rey”).

I spent two months conducting research to gather information about the costume, collecting images and gathering advice from different online sources. The *Replica Prop Forum* (RPF), and the *Rebel Legion* forum were both useful sources, although the RPF became a primary source for costume construction, as that site has a live Rey costume thread (“Rey,” 2015). As it can be
difficult to search a forum, I took screenshots of posts that were relevant to the costume or had lists of costume parts or information regarding types of fabric, patterns, and dye (“Rey”). Screencap websites such as Star Wars Screencaps.com were also important in determining the details of the costume that were difficult to see in standard shots, which was especially important for me, because I wanted to create a screen-accurate costume, one faithful to each detail of the costume on the screen.

This costuming research activity has been invaluable in teaching patience, perseverance, and the importance of solid research. With my requirement of the costume being as close to screen accurate as possible, each piece had to have the exact same sewing details visible on the film costume. The sewing stitch had to match the stitch used on the costume, which varied from seam to seam, and the color of the fabrics had to match the colors on the display costume. Research into the detail of the costume was not only invaluable, it was a necessity. Screencap websites allowed me to obtain high resolution images of moments that were shown only briefly in the film. These moments often revealed details not seen in many shots. I learned a great deal, progressing from only basic knowledge of how to work a sewing machine, to learning how to pattern shirts and add ribs to clothing. Because of this costume project, I am now able to sew proficiently.

The costume generated by this project is functional as a basic Rey or Scavenger Rey costume, although it is not yet complete. The final completion process will include weathering, creating one more bag, and creating the boots. The costume is breathable and is wearable in a variety of temperatures due to the fabrics and its flowing nature. I have worn the costume outdoors in weather with temperatures ranging from the high 40º F, to 70-80º F, and have been comfortable in both temperatures. This confirms the costume’s design as primarily desert-based, intended to provide protection against the extremes that are part of desert life.

My work on this project highlights the value of being a part of costuming communities such as the Rebel Legion and the RPF. Without the patterns and work shared by these communities, many extra and difficult hours of labor would have gone into this costume. Members such as “TheLadyNerd” and “kristen jones,” who posted everything they tried, whether successful or not, were helpful in deciding what worked

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and what did not. Members such as “division 6” drafted and shared patterns and found items that matched pieces on the costume; countless other members posted so many images of their work, and the costume from different angles that it was almost as good as seeing the original. The discussion, research and experience on the forums were thoughtful and thorough.

When I began the costume, the first item I purchased was the staff, from KyleGilbertProps on Etsy. This prop is satisfactory in terms of how it represents Rey’s staff, is the appropriate height, and came lightly weathered with silver paint, but it needed more work to make it authentic. My research on how to weather the staff was based upon my observations of methods shared on the RPF. I used light amounts of two spray paints: a red-brown truck primer that gave a faint rust color when misted over the prop, and a brown textured paint that gave the appearance of caked sand when dabbed on with a small brush. Both paints were Rust-Oleum brand. The handle of the staff was weathered, then sealed with a clear matte Rust-Oleum paint, to reduce wear with constant handling. The rest of the prop, which was resin cast on an aluminum pole, was not clear-coated. My research on the RPF indicated that spraying clear paint over resin would turn it grey and dusty in appearance, which would need to be sanded off and the weathering redone (“Rey”). A light application of a silver leaf cream (Rub’n Buff) to a few edges near the top and bottom gave the appearance of raw, worn metal. I refashioned the fabrics that came wrapped around the center of the staff by re-using some of the fabric that had come with the staff and some scrap fabric I had on hand. The fabrics were dyed to more closely match the film fabrics.

The first piece of fabric I purchased for this costume was the viscose for the long dress-like wrap. This fabric was found by a member of the RPF (“Rey”) and was the closest match to the viscose used in the original costume. My research for dyeing this fabric consisted initially and primarily of observing the results for other costumers. One of the RPF members had a simple method, blending two colors of dye, Taupe and Tan (“Rey”). Scraps of the viscose were tested in the dye to confirm the correct color. The images of Rey in the Star Wars: The Force Awakens Visual Dictionary were used to compare the color of the fabric while dying to make sure the shade was correct (“Rey”; Hidalgo). Once the correct color was achieved, the entire fabric piece was put in and stirred continuously while timing it. Once the fabric appeared to be about a shade darker than the correct color, it was rinsed in cold water and taken
outside to check the color tone against the reference images. As the color of the costume shifts slightly depending on whether it is indoors or out, this was a crucial step. The viscose was then set aside until the tunic was finished, when it was picked up again.

I knew that I would need help in finishing the wrap, as it needed to be stitched to the shoulders of the tunic, and positioning it would be difficult while I was wearing it. I therefore enlisted a duct tape dummy (Figure 2). The dummy was a stand-in for a dressmaker’s form, and was made by wrapping my entire torso in duct tape. The tape was cut off leaving a shell that was stuffed with paper and taped closed. The result was a model of my torso that I used as a double for fitting the tunic and wrap.

To fit the wrap, I folded it in half at various widths to determine the final width against my body size and the tunic. The wrap was then cut down to 18” and the raw edges on the long sides were sewn with an overlock stitch to prevent fraying. The short ends of the wrap were left raw, as they are slightly frayed in the film. I set the wrap aside again until the belt was finished. Using the belt to help hold the wrap at the waist, I adjusted the positioning of the wrap as it would finally be worn and marked the shoulders for gathers with a pencil. The wrap was gathered at the shoulders by running a loose straight machine stitch through the shoulder fabric, as seen in reference images. The loose threads were pulled to gather the fabric, before it was stitched over again to hold the gathers in place; both gathered areas were sewn to the shoulders of the tunic. Here was where I used the dummy to wear the shirt, so that the wrap could be pinned correctly.

The next two fabrics I ordered were the fabric for the headwrap and the fabric for the tunic, both of which were the screen accurate fabrics as listed by Disney. All subsequent fabrics for this costume came from the Dharma Trading Co. fabric website (“Rey”; Dharma). I over-ordered the amounts by an average of a yard to minimize the risk of a major setback due to a sewing mistake. In the case of the headwrap fabric, this was two times the amount needed due to an uncertainty about shrinkage.

The headwrap fabric was listed as ‘handwoven’ and had a wide, loose weave that shrank considerably with washing and drying, creating a bubbled,
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The wrinkle effect (Dharma). It was a soft, easy fabric to work with, being both light and breathable. Dying the headwrap fabric was done in the same manner as the viscose, but a slightly different color needed to be achieved—lighter and greyer. I used a similar method of testing pieces of the fabric in the dye as for the viscose. The dye for the headwrap fabric was a splash of RIT taupe dye mixed with a smaller splash of RIT pearl grey ("Rey"). The dying process was the same as for the wrap, with the dyed fabric being viewed under different lights to ensure that it was as close to both the film and display images as possible. The body of the headwrap was made using the pattern for the tunic. The sleeves of the headwrap were long rectangles of fabric the appropriate width to attach as sleeves ("Rey").

I had the most difficulties with Rey’s tunic. This part of the costume was deceptively simple in its design, but to an inexperienced sewer, difficult to replicate accurately. The tunic required two full body mock-ups, six different attempts at the modified Henley-neck—two of which were done on the final shirt—and innumerable mock-ups of the ribbed sleeve. The tunic is made of a cotton-hemp jersey blend found at the Dharma website ("Rey"; Dharma) in the ‘natural’ color, which is no longer available. This fabric is the screen accurate fabric for this tunic; it is comfortable, and thermo-regulatory in nature.

The shirt is a tunic length t-shirt that falls to just below the hips. It has a modified Henley-neck, and two small cap sleeves. One of the sleeves is simply the fabric sewn purl-side out, but the other is ribbed in a distinctive ‘M’ pattern (Figure 3). For this, I had to experiment with sizes of ribbing and spacing. The final ribbing pattern was a section of the fabric folded into a small ‘M’ with each fold about ¼” deep and stitched down the middle. ("Rey"). There were five ribs on the sleeve. To achieve the correct ribbing in proportion to the sleeve, I calculated how much fabric each rib took (1”) and added that to the base sleeve dimensions, plus a little extra. The sleeve was then resized and cut to the
new, larger dimensions and ribbed before being cut down to the correct size (“Rey”).

The sewing ease¹ for the sleeve was sewn to the outside, pressed away from the body of the shirt, and the seam overstitched with a zig-zag stitch.

The pattern for the shirt was homemade, using a technique suggested by the RPF member kristen jones (“Rey”). I used a pre-existing shirt, which I folded in half, laid on a piece of cardboard, and traced around. The shirt was then folded to reverse the side being traced, and the same process was repeated. This gave me a pattern for the front and the back of the shirt (“Rey”). I used a commercial t-shirt that already had the sides trimmed down and the sleeves cut to make it more form fitting; this shirt became the model for the pattern. I mocked up the body of the shirt twice in blue jersey bought from Hobby Lobby. The armholes initially were too large, so I had to take the sides of the shirt in and recut the armholes, which meant I also had to redraft the pattern. I transferred the pattern from cardboard to cardstock, and re-drafted. The second pattern was then mocked up again, and had a more satisfactory fit in the armholes and body. This second mockup became the base for the final tunic.

The inside neck of the tunic was bound with bias binding made from the shirt fabric, and has no visible binding on the outside. The instructions for this were found in an old Vogue sewing book dating from 1964 (Vogue); I also used a comprehensive online tutorial (“Simply”). Bias binding was cut from the extra mockup fabric, using a similar binding on the inside of an old t-shirt as the model. Care had to be taken that the ribs on the bias binding lined up with the ribs on the body of the tunic, or the neckline would no longer have full stretching capability. This binding was practiced around the neckline.

¹ Ease is the sewing term for the extra fabric, usually on the inside of a garment, left after a seam has been sewn.
before adding the slit for the Henley. To mark for the Henley, the shirt was folded in half to find the center of the front, then a line was drawn down the center with tailor’s chalk. I cut down the center of the shirt until the end of the slit rested in the same place as it did on Rey in the film. The Henley was made using traditional Henley techniques, but was sewn closed until about \( \frac{3}{4} \) of the way to the neck. The side seams of the shirt are pressed flat and sewn over with a zig-zag stitch.

The pants were the first complete item of clothing attempted and finished. The mock-up for these was not difficult. I used a pattern found by a member of the RPF, which was for a similar pant type. The pattern was designed for knit fabrics, but I mocked it up in a jersey t-shirt material, as that was the least stretchy fabric recommended; the final pants needed to be in silk. The original pattern was too long in the legs, so I trimmed them to bring the right amount of bagginess to the legs and redrafted the waistband and cuffs to accommodate a non-stretchy material. The adjusted pattern was cut for the legs, but a new pattern was drafted for the waistband and the cuffs at the lower legs of the pants. The pants were then mocked up in cotton to test the fit and modification before moving to the final draft. The fabric for the pants was a stonewashed silk crepe de chine from the Dharma Fabric Co. website. It translated well to the modified pattern, and had the same texture as many of the pant photos.

Rey’s armwraps were a gift from another member of the RPF, who found them for sale by ebay seller gilpinc-123 (Tea). I dyed the armwraps at the same time as the headwrap, but after the headwrap fabric had been removed from the dye. I used the same bath, because the color of the armwraps appears to be almost identical to that of the headwrap, but a slightly darker shade (“Rey”). In this case, that meant letting them sit for a slightly longer time than the headwrap fabric. I stirred the armwraps constantly in the dye, and after a few minutes took them out and dried a corner with a hair dryer to see if I had the correct color. I repeated this until the color of the armwraps was satisfactory when compared to the headwrap fabric and the images collected for reference. The armwraps were then line-dried, as the fabric manufacturer did not recommend putting them in the dryer.

Rey wears compression sleeves under her armwraps, which are a similar color, but slightly tanner. The compression sleeves are visible in some of the promotion images that feature close shots of Rey’s torso. The compression sleeves for this costume were found by the RPF member
Kendra, who provided a link to an Amazon listing which is no longer active at this time (“Rey”). These were SUB brand compression sleeves in white, with a silver logo. I removed the exterior logo by steaming it with an iron and peeling it off. While it was time-consuming, it was also effective. The compression sleeves were lightly used during this time, and after part of the logo had been steamed off they sat for some time with no interaction. Upon returning to them, I discovered that the logo was easier to peel off than previously. Unfortunately, there is currently no way of ascertaining whether this was due to steaming it first and letting it sit, or to some other undocumented factor.

I had to dye the compression sleeves as well, as the ones visible on Rey’s costume are a tan-taupe color like the viscose wrap, but not differing much from the color of the armwraps themselves. However, the shade is darker when seen in images taken from both the film, and promotional shots. I got the correct color by dying the compression sleeves in the same dye bath as the head and armwraps, but adding “a couple of splashes of tan, and a splash of taupe” (“Rey”). This ad hoc method returned a very successful result.

Rey’s bracer is made of two distinct colors of leather (Figure 4). While bracers dating from medieval times were usually protective pieces of armor worn over the forearms, Rey’s seems to be more decorative, as her gloves cover most of the same area when she is wearing them. The bracer occasionally looks as though it is made of two different types of leather, and this is likely true as there are usually several versions of a costume. I initially tried to make the bracer with two pieces of leather cemented flesh-side together (“Rey”), but this was too thick to fold around my wrist the required amount of times to fasten it. Instead, I used a technique authored by the RPF member, RPFKOV, who spliced two different pieces of leather together exactly where they pass through two slots and under a small bar of leather (“Rey”). I brushed the hair sides of the leather with a light coating of Tandy Leather Eco-Flow Bison Brown to darken them. Pattern dimensions were by division 6, but I scaled them up to fit my wrist (“Rey”).

A distinguishing feature of Rey’s Scavenger costume is the leather backpack that she carries. It has a gusset making up the sides and bottom, and a fold-over top that fastens asymmetrically to one side of the face. There were few good images of the bag in the film, but it was put on display with the rest of the costume, allowing people to take pictures (The Rebel Legion; “Rey-Jakku”). I was given a 4-5 oz. hide in
the same color bought from Maverick Leather online. The pattern for the bag was one posted on the RPF by one of the members, division 6 (“Rey”). This pattern is quite easy to put together; my main concern was in the laying out and cutting of the pieces of the bag. I used three images posted on the Rebel Legion forums almost exclusively (“Rey-Jakku”), as these images showed the backpack in detail from the three visible sides when it was being worn.

The first step of construction was sewing a pocket to the gusset, to hold two greeblie\(^2\) sticks on the side of the bag. The gusset was sewn to the face of the bag. A piece of British Enfield gun sling was added to the other side of the gusset to hold a water bottle prop, and a strap was added to the bottom to hold a larger water bottle. Part of the gusset comes out over the side of the face and holds two small canisters; this was not cut long enough originally and had to be spliced with another piece. The fastening strap was also added to the face of the bag. The back piece of the bag held the shoulder straps and the bag fastener, as well as having some webbing and greeblies attached on the top (Figure 5). All the greeblies are from a 3-D printed kit bought from a Rebel Legion member through the RPF.

I cut the shoulder pad from a sage green chindi rug from Kohl’s online store (Park). It was backed with extra canvas left over from the belt pouch to prevent unraveling. I finished the detailing with green webbing and black metal tri-glides bought from Etsy; the shoulder pad was also painted in a burnt sienna acrylic paint thinned with water. I repeated the paint twice to give the pad the faded, bleached color of the original, while retaining a faint green color.

Rey’s belt was made from leftover leather from the backpack. I cut a strip of leather 61” long and 3” wide. The pattern I used was one posted by the RPF user division 6, the basic dimensions were worked out by kristen jones (“Rey”). The weight of leather I used to make the belt was 4-5 oz., but I might use something slightly heavier next time. There was one issue that came from using a lighter weight of 4-5 oz. leather for the belt: once the leather softened, the bottom strap no longer stayed well

\(^2\) ‘Greeblie’ is a term unique to the costuming world, as far as I can tell. It refers to various small/odd items included in a costume not because they have a function, but because it makes the character look more authentic.
when pushed through the slits in the belt to hold it. This was rectified by taking four small black rubber hair ties and wrapping two of them around the tail of the belt each time, it was pushed through the keeper slits.

When making the belt, there were a couple of images that were invaluable. The first was an image of Rey packing her vehicle, which is taken at medium-long range and shows the side of the belt well. The other image was the page from the *Visual Dictionary* (Hidalgo), which helped in determining the degree that the belt narrows toward the front tip. The most difficult part of the belt was deciding how far apart to space the division of the leather. The belt is made from one piece of leather that is partially split on both sides and left connected in the center (Figure 6). How long to make this center was the most concerning thing. Too long, and the belt would look bulkier. Too short, and the belt would look wrong as well. The tips of the front half had to sit at about the center of the wearer’s right side, and the slit begins at or a little beyond the left hipbone. The back of the belt was slightly harder, as the slit here started a little further forward, toward the side seam of Rey’s shirt. Both slits were started with a small hole punch to reduce the chance of the leather tearing in that area due to stress. The ends of the belt are tapered down to ¾” and folded over two small rectangle rings. They are doubled back on themselves and sewn with an “X” to secure them. An image from behind the scenes of the *Force Awakens*, *Vogue* cover photoshoot shows this side of the belt very clearly (*Vogue*, “Rey”).

The canvas bag that Rey wears on her belt is originally made from a cut down World War II British Signal Satchel. However, I bought a tan canvas from Hobby Lobby and made the bag using another pattern designed and provided by division 6 (“Rey”). The thread I used was by Coates and Clark: Heavy Duty in the color Dogwood. I had to modify the pattern for the cover of the pouch by adding about an extra inch of length and width so that the hems could be folded under twice to prevent unraveling of the canvas being used. Coincidentally, this is how the edges of the Signal Satchel are finished, probably for the same reasons.
When Rey first appears, she is wearing leather gloves to protect her hands as she sorts through old starship engines and junk. These gloves have canvas covered cutouts over the knuckles on the back of the hand, and the middle knuckle of each finger and the thumb. They appeared on the display costume, although screencaps of the underside of the gloves were invaluable while I was constructing them. I made my gloves from plain yellow deerskin work gloves bought at Tractor Supply Co. I used a non-permanent leather marker to indicate where the cutouts would be while constantly referring to a display image of the gloves (The Rebel Legion). Using leather shears, I carefully snipped out the cutouts. I cut leftover canvas from the belt bag into rectangles and hemmed it so it would not fray. I took the gloves apart at the seams but without detaching the front and back from the rolled cuff. Using a three-sided lambskin needle I sewed the canvas to the inside of the glove by hand with two rows of stitches for screen accuracy.

Once I had a canvas inset sewn under every cutout, I added a suede reinforcement to the palm of the glove. The leather I used for this was the flesh side of a red kidskin purchased at Hobby Lobby and dyed with Tandy Leather Eco-Flo leather dye in Bison Brown. The suede palm covers the palm of the gloves, between the thumb and the first finger, and rises partway up the other fingers. It is sewn on in the same thread used for the canvas insets. I resewed the glove together by hand, sewing the glove inside out and then turning it right side out upon completion. I used the same stitching holes left by the factory and simply sewed through them again. I then dyed the entire glove with two coats of the Bison Brown dye, and streaked small dots across the canvas insets to give

Fig. 6: Rey's belt looks deceptively simple to craft
the appearance of grease.

The Tractor Supply gloves had an elastic across the back of the wrist to ensure that it would stay on while wearing it. Rey’s gloves have one across the inside of the wrist, seen in screen captures of her wearing the gloves and on the display models. I removed the elastic from the Tractor Supply gloves; it was unable to be reused, so I bought an equivalent width elastic from Hobby Lobby. I stretched a short length across the inside of the glove, and secured it at the side seams with small clamps. The elastic was then allowed to relax, crinkling the leather above it. I then tried the glove on, and adjusted the tension of the elastic until the wrist of the glove fit correctly. The elastic was sewn to one of the side seams of the glove, with a clamp holding the other end. The elastic was stretched out while being sewn, allowing the inside wrist of the glove to straighten. I hand-sewed the elastic to the glove using small stitches in a zig-zag pattern across the elastic.

The goggles were the second item I did not make. They were made by the RPF member kristen jones during the brief time that she was offering them for sale. They are made of leather, pigskin, felt, elastic cord, plastic vacuum-formed lenses, and resin-cast pieces. They are also screen-accurate, and are quite sturdy.

My costume is still in the final stages of completion, with weathering, one more bag, and the boots still to come. Overall, this costume has been a remarkable learning experience for me. It has shown me that research can cover all kinds of interesting subjects, not just the traditionally considered ones, such as history and science. It has taught me new skills of sewing, basic pattern drafting, and aging, and has given me a new respect for collaboration in research. Through this project, I have expanded both my knowledge of my own academic and artistic abilities, as well as my confidence in researching and undertaking an unfamiliar project.
Student Biography

Maria Hendrickson is currently a junior at SHSU, pursuing a dual degree in Spanish and Biology. She is a member of the Elliott T. Bowers Honors College Ambassadors, with plans to graduate in the spring of 2020 and pursue a career in Wildlife Biology. Her interests have always been multi-faceted, with costuming and mounted archery among her favorite pastimes. She became aware of costuming in the fall of 2013, after researching whether accurate film costumes could be bought. Maria presented her work on costume research at the 2018 Undergraduate Research Symposium, after consulting with her advisor, Dr. Tracy Bilsing, who helped Maria realize the extent of the research she had already conducted while creating her costume. Maria intends to use her costume in charity work for children, and hopes to continue costuming.

Reference


Tea. “RE: Bandages.” Received by Maria Hendrickson, September 14 2016.