

Handspring Puppet Company

Adrian Kohler

With contributions by

Basil Jones and Tommy Luther

Adrian Kohler and Basil Jones are puppet makers at the Handspring Puppet Company, Cape Town, South Africa.

Introduction

One question that might usefully be asked in the context of a journal such as this is: “What makes puppetry different from other crafts?” This is, in a way, a question about ontology, because it could be argued that a puppet in performance (that is to say, a puppet functioning as a puppet) has a different status to any other craft form: its main objective is to strive to *live*. Putting this another way, a puppet is a craft object which does not function—in a way, does not exist—unless it is being animated by a puppeteer. Here we are assuming that a puppet is by definition an object that is manipulated in front of an audience in order to simulate life. Therefore “seeming to be alive” is in a way the *ur*-narrative of any puppet. This “striving for life” is its basic story, the story that underlies any other story that may be overlaid on it by a script. So “story” and “life” have to be part of the very nature of any puppet.

It helps therefore if this *ur*-story is somehow crafted or built into the puppet. This is where the puppet designer assumes importance. The puppet maker will often design the puppet so as to enhance its ability to emulate life: the limbs and body will bend in appropriate places; the head will turn and nod; and sometimes the eyes will be made out of faceted beads so that they catch the light, and seem to move and therefore “see.” Puppet designers must think of the puppet as a kind of semiotic system. We need to analyze how the puppet will function in performance, and try to build into it the potential for as wide a range of signing as possible.

Another difference between a puppet and other craft forms, of course, is that it requires a puppeteer to make it live. You could say a knitted shawl needs a person to use it before it functions as a shawl, or a ceramic pot needs to be filled and used before it is truly a pot. Function is often an important factor with crafted objects. However, puppetry presents an extreme case, as the puppeteer becomes a significant collaborator in the semiotics—the generation of the meaning—of the object. Puppeteers must take up the panoply of signing systems provided by the designer/maker and develop them, with whatever talent and skill they possess.

Thus, in a sense, a performing puppet is always a part of a *gesamtkunstwerk*—a moving synthesis of a number of sign systems, brought about through the work of a number of artists: scriptwriter, designer, maker, and manipulator(s).

In the following article, Handspring's Adrian Kohler examines the creation and performance of a puppet produced for the play *War Horse*, which was adapted from the novel by Michael Morpurgo.

—Basil Jones

.....

The story of *War Horse* is set during the First World War. Albert, a farm boy, brings up a foal that his drunken father bought by mistake. When war breaks out, the father sells the horse to the army, where it is soon drafted into German service after surviving a cavalry charge that saw an English officer shot off its back. The horrors of the war are told from the horse's vantage point. It doesn't take sides, but responds to food and kindness

as a horse might be expected to do. Albert joins up (under age) and searches for his horse for the whole of the war. Miraculously, at the armistice, when both have been badly battered, they find each other.

My immediate response to this story was positive. We had made a good giraffe in a previous production; we thought a horse should be possible. Tom Morris, associate director at the National Theatre in London, sent us the novel.

The First Workshop

Of course a novel isn't a play. At the flick of a pen, a reader can be whisked away from rural Devon to the trenches of Belgium, from a plowing competition to a cavalry charge, to a full battle scene with tanks and mustard gas. How were we to depict the cavalry charge of 150 horses?

The first workshop for *War Horse* was staged at the National Theatre Studio, a separate building located fairly close to the actual theater. It's an institution where new ideas are grown into projects that might receive a green light. There are rooms for writers and rehearsal spaces. Some ideas have left the building never to be heard of again; many others have gone on to achieve great renown. There are people there who still remember when Peter Schaffer's play *Equus* was in development. This first workshop was held with a try-out writer and a group of actors.

Among them was Toby Sedgewick (who would become the choreographer and create the role of Ted Naracott, Albert's father). Also present was Mervyn Millar, who would recruit the many excellent puppeteers we would be needing, would write a book entitled *The Horse's Mouth: Staging Morpurgo's*



Fig 1 Joey and Tophorn prepare to lead the Devonshire Yeomanry in their first charge of the war.

“*War Horse*,” and would be one of the leading puppeteers in the first two seasons of the production. Alan Edwards from the National’s prop department was seconded to us and together we made quick mock-ups of horse heads and necks out of torn cardboard and shredded newspaper. On a day when the Olivier Theatre stage was completely clear, we were able to take these and a complete life-sized cardboard horse on to the vast round performance space. Sitting high up on the balcony looking down on these “horses” trotting round, the stage seemed built for them. In its bare state it was like a circus ring, an ancient Roman arena.

Model Building and Problem Solving

Back in Cape Town, I built a working cardboard scale model. The anatomy of the horse’s legs and those of the humans inside it would not correspond with each other, as they had in our giraffe; there would be eight legs under the horse, not four. But the hands of the puppeteers would be in close proximity to the puppet legs and therefore available for hands-on manipulation, so the legs could be highly articulated. If I could successfully mimic the way a horse’s hoof automatically curls under as it is lifted off the ground by the upper leg, I would be a long way toward making credible limbs that would

easily pull focus from the human legs walking beside them under the horse.

Whilst preparing working drawings for the prototype horse from the scale model, I realized that I would need help to build the full-sized version. I had often used cane before in the construction of large figures. But, with front and back legs, head, neck, tail, ears, and weight-bearing body, there were too many new systems to be developed on my own. I put word out for a technical wizard and Thys Stander appeared. Long-time puppet friend Hansie Visagie introduced him to me, with a word of advice: "Give him a problem to solve, and he will be happy."

Over the next four months, a horse that could be ridden started to take shape. For the spine, I enlisted the help of Mark Laubser, a specialist aluminum welder who normally builds boats. The two puppeteers inside would each strap on a backpack. Above their heads the backpacks would be attached to this bridging spine, made strong enough to take a human rider and high enough to protect their heads.

It is important when designing a new figure to ask the question, "How will it breathe?" The breathing action of any figure helps it create the illusion of life. Whilst observing real horses breathing hard after physical exertion, the problem of representing this looked daunting. The ribcage of the animal expanded out *sideways*. Even if I could hinge the ribcage at the spine on either side and develop a means of rhythmically manipulating it outward and inward, the payback would be minimal. Looking at the animal head-on, you would see the movement. Seen in profile it would be hardly noticeable. Our horses would be seen mainly in profile.

The solution proved to be very simple. As in a motorcar, the front legs would be joined to each other by an axle. If this axle were not fixed but given the freedom to move up and down in a slot, the "heart" manipulator, who is attached to the spine above by the backpack, would, with the front legs resting passively on the ground, be able to make the ribcage go up and down simply by bending and straightening his or her knees. This up-and-down movement replaces the more accurate side-to-side expansion of a real horse, but it is more effective because you can see it. No extra hand controls are needed; just the knees.

The construction of the legs themselves presented a more difficult problem. I had designed them to be cut out of plywood and then given three-dimensional shape with added cane. This plywood system had worked well for smaller figures. Scaled up to the full size of horse's legs, though, they were too brittle. Laminated with a strengthening plastic skin, they then became too heavy. Reducing the amount of plywood in the leg would mean augmenting the use of cane. This would in turn have to bear more of the weight and stress. The joining of the smaller plywood segments to the cane was where the problem lay. Any rigid gluing system would wear loose in time. The same would happen with metal straps.

Thys's answer was to literally sew the two materials together. By pre-drilling holes in the plywood along the area to be joined, and then stitching the cane to the plywood with a wire needle and thick, waxed thread, a very effective join was achieved. Although the stitching was tight, it allowed the cane to flex slightly but always to return to its original shape. It was



Fig 2 David Gyasi (as Captain Stewart) and Curtis Flowers (as Billy) ride Tophorn and Joey in the second cavalry charge.

labor-intensive, and hard on the hands—a leather glove is required for extended periods of work—but the result was that the plywood components could be reduced to only those areas of the legs that required absolute rigidity, namely the joints and pivots and hooves. It was a breakthrough. The cane basketwork of the body could now be used structurally in the legs, making them strong, slightly flexible, substantially lighter in weight, and consonant with the aesthetics of the body. By soaking the cane in water, molding each segment in a jig, temporarily wiring them together when dry and then finally stitching them, complex forms that revealed the anatomy of the horse (but that were at the same time structural) now became possible.

The ear and tail movement were the next two major challenges. Both would be very important semiotic “tools” for the horse puppeteers, being the indicators of the thoughts and emotions of the horse. Since our very first Handspring play I have struggled to amplify the driving distance that human fingers can control—that is, to increase the ratio of the movement of a controlling finger to the larger movement in a part of the puppet. When supporting a rod puppet with one hand, the least amount of grip you can use on the support handle is with the small finger together with the ring finger plus the heel of the thumb. Available for use on controls, then, are the stronger digits, i.e. the thumb, forefinger, and middle finger. Each of these has a finite range of

movement, enough to turn something at the other end of the connecting cable or string through 90°. I've never been able to achieve much more than that, but the ears on a horse need to turn through 180°. Pointing forward, they indicate interest. Pointing backward, they show fear or alarm. An in-between position indicates that the horse is listening.

One early morning, in a state of half dreaming, the solution presented itself: shift the drive point. By placing the drive point on a *pivot axle* under the ear, and not on the *circumference* of the ear itself, I would be able to radically increase the amount of distance the ear would travel by winding the drive string around this much narrower cylinder. This was my Eureka moment. I showed my discovery to Thys. (He immediately recognized an old watch mechanism he had seen long ago!) Now not only the ears would benefit. This “new” system would prove invaluable for the wing drives of the goose, crows, and swallows also needed for the production.

The design of the tail movement lay in understanding the anatomy of a real horse. The spine of the horse extends almost halfway down its tail. You can't see it because it is covered in hair but that's why the animal can flick its tail so decisively. This “spine tip” is highly flexible and controlled by several lateral tendons. We would simulate these with bicycle brake cables.

The head and neck controls were next. I was still aiming for the horse to be manipulated by two people. Personnel numbers in any production need to be kept down. In a piece with many horses, the cast of puppeteers would increase by the number of manipulators in each horse.

Two manipulators: good; three: a lot more expensive.

I built the “steering wheel,” a rocking bar with levers in it, and positioned it at the base of the neck. It contained control levers that—connected with brake cables—controlled the ears and could raise the head up. The rocking bar attached to lateral drawstrings could curve the neck from side to side like the giraffe controls had done. By attempting to control the horse with only two manipulators, there was a drawback. The head could only be operated when you weren't manipulating the front legs. When the horse stopped walking, you switched from the leg controls to those of the head.

Working with the Prototype

We were due to give the prototype a test run down the road outside our studio the day before it left Kalk Bay. But work on it was only completed after midnight. Thys had built a large crate for the sea voyage to London. The horse went into the crate untested.

A month later, back at the National Theatre Studio in London, Basil and I unpacked the horse with the whole of the next *War Horse* workshop gathered in front. Mervyn Millar had assembled the team of puppeteers. We had requested beefy, strong acrobats because they would have a rider on their backs. The group was a mixture of these and puppeteers of a more normal physique. In order for the heads of the manipulators to be safely protected inside the chest and rump of the horse, the horse was now slightly taller than life-size. This had raised the spine substantially higher than the ladder, which had rested at shoulder height between two actors when we tested the viability of their being “ridden” by another

actor. My fear was that this increase in size had also raised the center of gravity to an impossible height.

It was with a feeling of immense relief that we watched these beefy actors carrying an actor on the horse almost immediately. The “down” side was that they weren’t all puppeteers. Over the next couple of days, after trying various combinations, I took a chance and let the acrobats go (with one exception), keeping only the trained puppeteers and Tommy Luther. Their empathy for the figure was what made them valuable. For the endurance required, they would simply have to work out in the gym.

The prototype horse soon received the approval of the workshop. Almost immediately it was fully functional. Marianne Elliot had joined Tom Morris as codirector and the two of them and Toby Sedgewick began working scenes with actors that would test it within the demands of the story. At night, when the studio had gone quiet and

the prototype was hanging alone in the big rehearsal room, the Spanish cleaning ladies dubbed it “Rosinante,” after the skeletal horse of Don Quixote.

It became clear, from the start, that the horse would be a three-puppeteer figure. The head had to remain alive whilst the horse was in motion, so I attached a control rod to the neck just behind the head, and from then on a third manipulator worked the head and neck from the outside. This rendered obsolete the rocking bar “steering wheel.” All of its controls would now be incorporated into a control “box” on the new neck rod.

The Production

The lead-time for *War Horse* ended up being longer than is usual, but perhaps this is why as a theatrical experience it has proved to be so satisfying to audiences. The rigorous leadership of Tom and Marianne in the series of workshops built a unity of purpose amongst the whole creative team.



Fig 3 Joey and Tophorn fight for the position of alpha horse.

Things were able to cross-fertilize from one department to another. For instance, the skeletal “cane-drawing” of the horse is reflected in the fragmented look of the huge First World War tank that confronts it.

War Horse became the first play for us where neither Basil nor myself would be performing.

With the responsibility of the piece as a whole resting firmly on the shoulders of directors Tom and Marianne, for the first time Basil and I were now able to carefully analyze from the outside what it is that we require from a puppet performance.

From inside the production one cannot judge the overall effect of each character on the others or even whether the principles of puppetry are being effectively applied. In fact we had never formally conceptualized what these principles were, relying instead on instinct and the needs of the moment. Now we needed to teach how a puppet thinks, the importance of stillness, the uses of breath. We had to develop a method.

Although a puppet horse is the primary character in *War Horse*, it doesn't speak. In this first rehearsal period, as the directors grappled with a play adapted from a novel, essentially a devised piece, the bulk of each day was spent on making the dialogue scenes work; time allocated for puppet work being relegated to an hour at the end. By the end of the day, actors were tiring and it was a struggle to prevent these sessions from receding into a second-tier level of importance.

In addition the process of developing fully formed puppet characters in a production as large as this would inevitably be difficult because their presence in the play was not as fully represented in the printed pages

of the text as the roles of the human characters were. (In fact the puppeteers have now developed their own parallel text, used amongst themselves to motivate actions from a horse's point of view. This text is passed down orally as “old” horse puppeteers hand over their roles to new teams.) After the first season, the essential role of the puppets had been recognized and the rehearsals of the second season and subsequent West End transfer rehearsals have fully accommodated the requirements of the puppets.

Apart from the exhilaration and love for our craft that participating in *War Horse* has allowed us to feel, there are other more lasting benefits. The puppetry principles that the horses forced us to formulate will be utilized whenever we are required to train new puppeteers or devise a new piece. The technical advances which the construction of the horses demanded will be usable in many different ways by ourselves and anyone else who needs them. Above all however, the puppet has made another loud claim for legitimacy in the theater that has been heard by record-breaking numbers of the theater-going public.

A User's Guide

Tommy Luther, who played the heart of Joey right from the first prototype workshop to the end of the second season at the National, decided not to move with the production to the West End. Here are the notes he wrote (in January 2009) to the person who would replace him.

Here are some notes for people getting to grips with the heart of Joey.

Economy of tension. Try to avoid the entire body being in a complete state of tension as normally happens when learning a new technique. I always find when learning something new that I tense every muscle but the more you become used to it the more economical you can be. Find moments when you are not making an excessive amount of effort. This can be through gravity and the weight of the puppet, its natural swing and gait.

Avoid exhaustion. Walking round in circles becomes tiring and sloppy. Do an average of twelve rounds of “1, 2, 3, 4” then find an intention for the horse to stop, and another to start again. Use the pauses to discuss as a unit what’s working, what feels right and what’s missing.

Don’t knacker the wrists. A lot of the momentum is in the knees; allow the side-to-side movement to be dictated by the



Fig 4 Joey with manipulators Craig Leo (the head), Tommy Luther (the heart), and Toby Olié (the back legs and tail).

shoulders. The more you put into the body (distributing rather than putting everything into tension) the more you will protect the wrists. This will be extremely useful when you have a rider; when you have to kick or lash out, and especially for the gallop.

Get used to the pendulum or natural swing. The brain will say, “When I release the lever the hoof will immediately hit the floor;” but in actual fact the release has to happen a moment before because the leg is so long. This will be more apparent in trotting, but be aware of it in walking mode. Practice stamping the foot, or doing a toe tap to get used to this.

Speak to each other. “1, 2, 3, 4,” as infuriating as it is, is essential, especially to the person in front. The person at the back can stamp down the hoof on their “1–3” count, but the tendency of the person at the front is to clench the lever (which will bend the toe, elbow and shoulder joint) on the “2–4” count, when they should be releasing it so that it is the hoof making contact with the ground in rhythm of “2–4.” Make sure it is 1–2 (DeeDum), 3–4 (DeeDum), with a minor gap in between.

Quality of movement. Trying to establish movement and rhythm patterns is monotonous and tiring. Add the different states of energy or intention and it tells a story and becomes interesting.

Breathing. There’s only about 10 cm to work between full inhalation and complete exhalation. From inside the horse this might not appear like much, but from outside can be extremely effective. The breathing can be

felt by the other manipulators even without vocalization (it's sometimes good to close the eyes to check that you can feel this), but vocalizing is a huge help to the others. It carries the emotional resonance of the animal. It is essential that all three actors support this for the horse to achieve its full capacity. This varies between supporting, sustaining, beginning, ending, or contributing a different tone or sound (like harmonizing high with low, or mixing an inhalation with a snort).

Breathe in the knees. This may seem emotionally disconnected and awkward, and it might feel more alive if you communicate it in the shoulders or by arcing the back and flexing the core muscles, but it will save your spine if you get used to this early on. When you have a rider on your back you want to have full support on the back muscles and let the thighs do the breathing.

Thought process of the horse. As this all comes from the head, the two people inside the horse must always read what the head manipulator is suggesting with the head. Direction is the first concern. But the height of the head, the angle of the neck and head, and the position of the ears communicate several intricate stories. Try to spend more time reading what the head is thinking and less time being meticulous over the feet patterns. Joey's reactions and inquisitiveness are more fun to do than walking patterns (and plenty of time will be spent on that).

Tommy Luther

Acknowledgements

All photos are by Simon Anand, courtesy of Handspring Puppet Company and the National Theatre. *War Horse* is running at the New London Theatre through February 2010.