



Some puppets by Character Design Students 2018

(all photos by the author, if not stated otherwise)

basic hand-puppet building instructions – “Malmö style”

Jakob Dittmar, Malmö University, 2018

This hand-puppet is controlled by one or more puppeteers placed directly behind it, following some simplified bunraku-approach. We use it for workshoping at Malmö University’s independent course on Character Design. It is heavily influenced by puppet designs used by Malmö Dockteater and Malmö stadsteater earlier. These puppets can be build cheaply and without sophisticated tools or machinery.

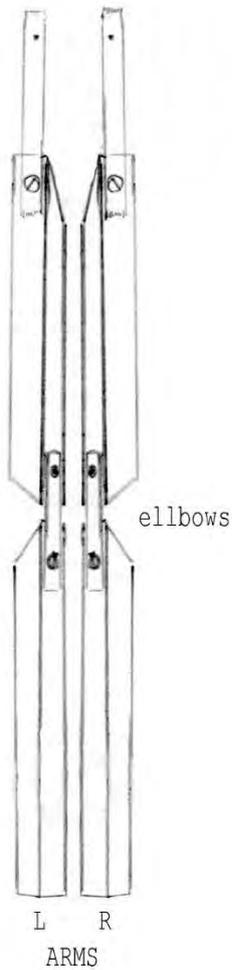
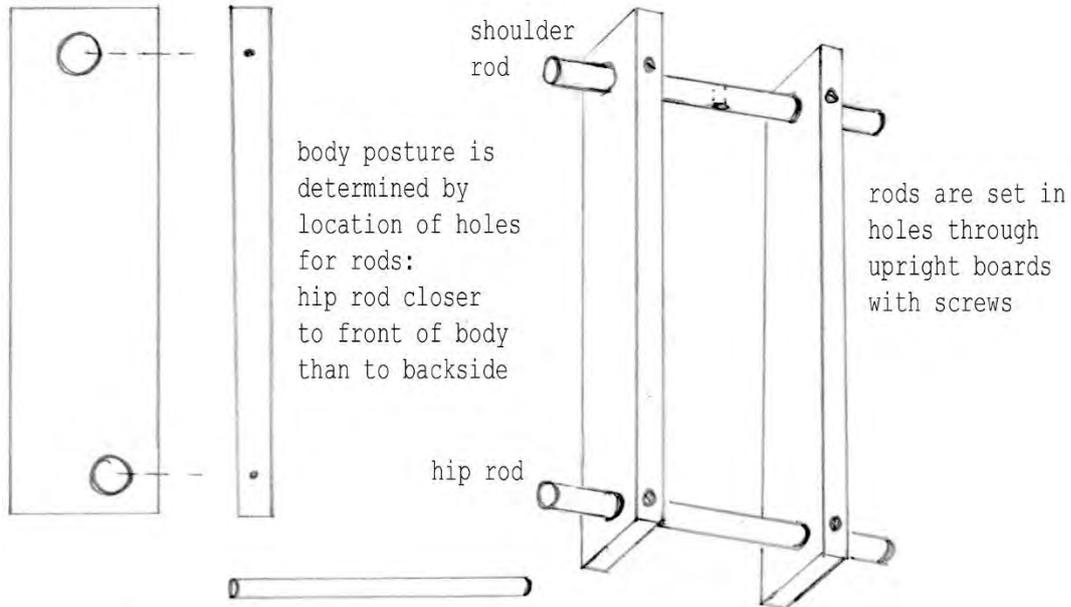
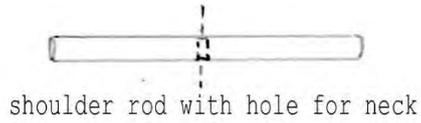
Material: Cardboard, a broom stick or similar, wooden balls or table tennis balls for the eyes (depending of format of eyes of course), glue, two dowels / plugs and a bit of stiff wire for the control of the eyes. Some ends of wooden boards – one for upper jaws, one for the head’s top, two for the uprights in the torso. Plywood or sturdy cardboard for the lower jaw. The torso can easily be built around a carton box, carefully glued shut, so that it becomes stable. Pvc-pipes and possibly fitting foam insulation around these pipes to build arms and legs. Some cheap rope and/or textile band for their joints. But alternatively: stuffed legs of smaller trousers or some pullover’s arms do the job as well!
Screws can be used to secure rods, and the arms & legs joints.

About steering: The puppet can be hung to the shoulders / head of the puppeteer from the ends of its shoulder-rod easily, but works fully well if simply held by the handle inside its head.

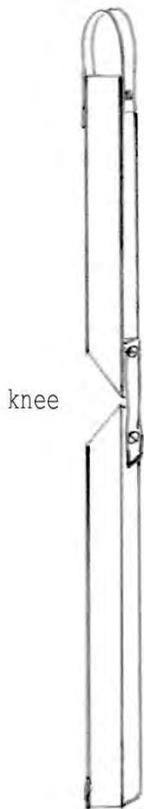
Preparations: After sketching the figure’s appearance in large scale, it is quite easy to build the following puppet body and head as carrier. The detailed features are gued on or modelled around it. The same is done with the head: the box inside the head contains the eyes, their possible steering, and the gripp for the head / entire puppet. The features of the head are modelled around / on top of the box – it has to be built in suitable dimensions and form to avoid frustrating later adjustments! Esp, when the head-box is formed to support some animal’s head or fantastic beast or or or, it is crucial to test the basic cardboard-box for shape and handling, before a lot of work goes into details!

Tools: a knife or cutter, a wooden saw, a thin and a wider wooden drill (2 - 3 mm and 6 - 8 mm), a stapler (not those for paper).

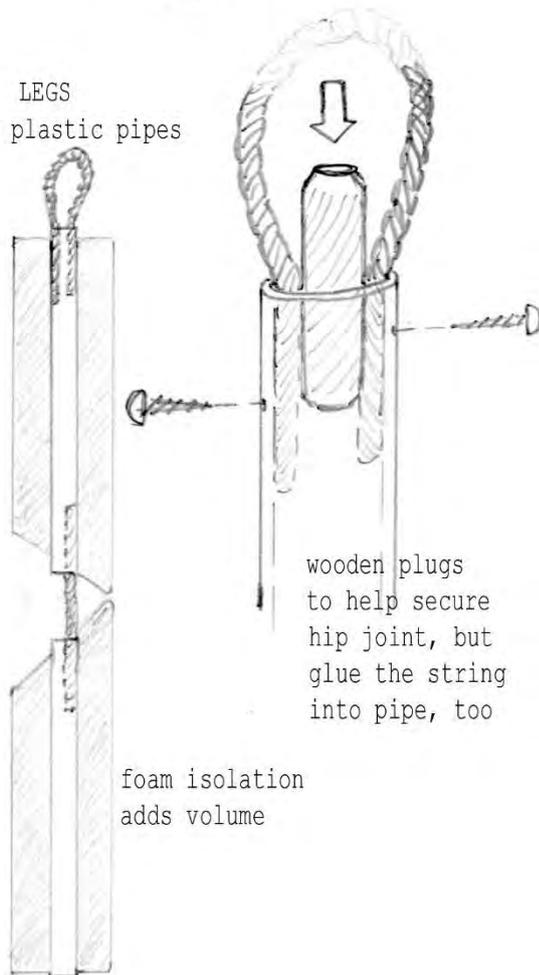
Body:



LEGS from wood

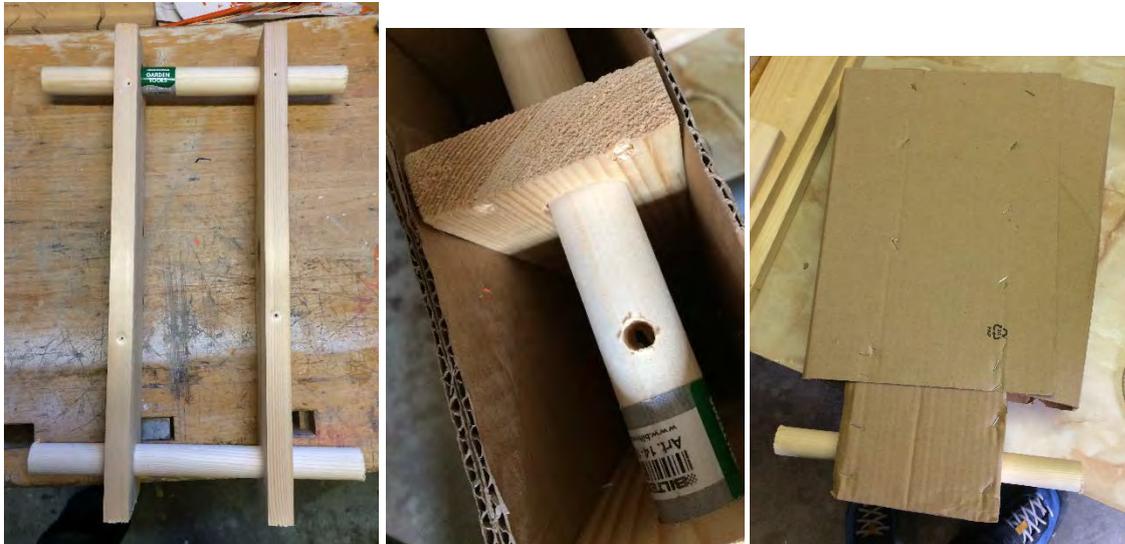


LEGS from plastic pipes



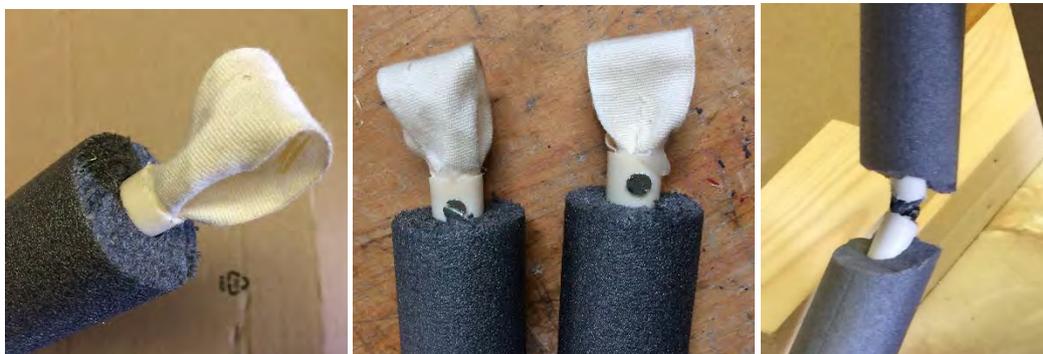
Build the base from two bits of wooden board and two wooden rod-bits (broomsticks are fine) – set the boards in a distance that helps define your figure’s torso-dimension. Fix them to the rods using screws.

Think about body posture before drilling the holes for shoulder and hip: upright, bent forward, etc. Drill through the shoulder-rod for mounting the head there, later. Animal bodies can easily be built in this way, too! Wrap or cover the body with cardboard or other suitable materials.



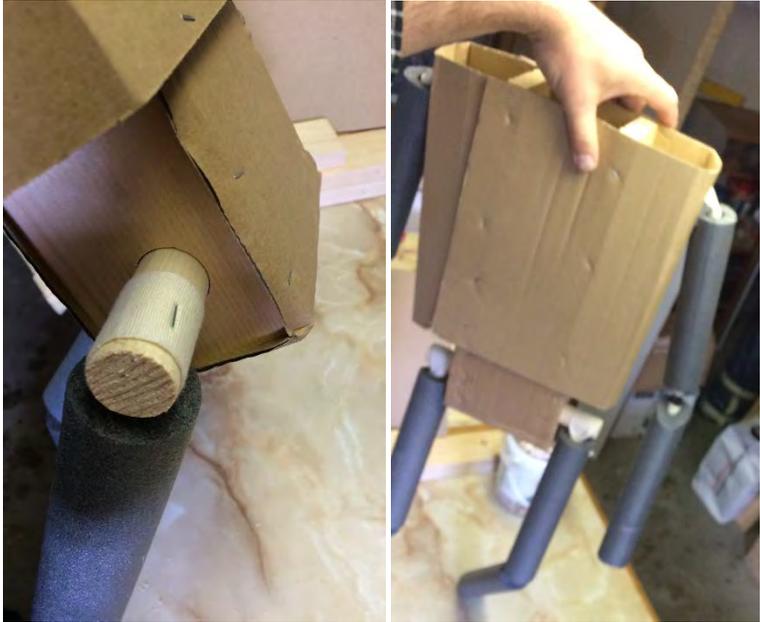
Legs and Arms:

However you build them – easiest is folding cardboard to some kind of tube / canal and fastening this on itself so that it becomes stable – make sure to add loops or lose ends of cloth or textile band, leather, or other flexible but durable material available at the ends of arm / legs – on both ends of these if you want to add feet or hands. These connect the arm to the shoulder-rod and the leg to the hip-rod. Fix the loop/end to the rod by stapling or screwing them fast.

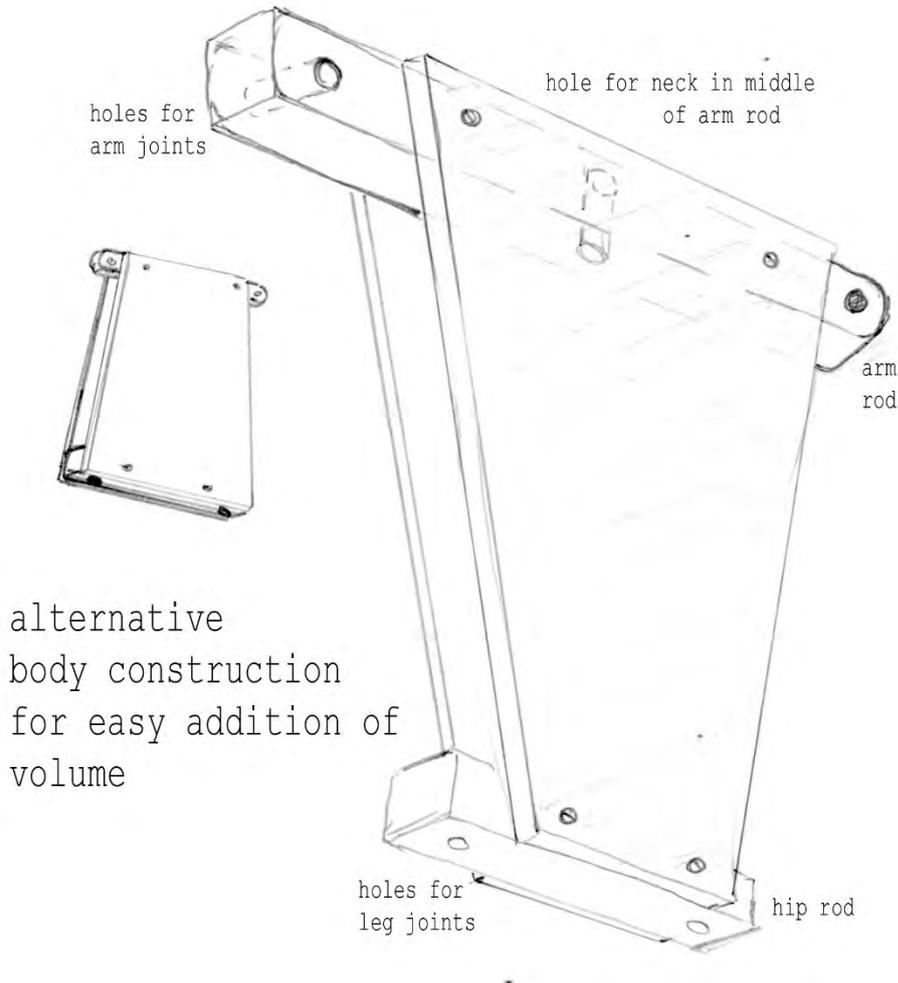


The elbow and knee are simply built from bits of the same flexible material that are fixed to the lower and the upper tube / arm / leg. Allow for controlled movement in these joints: cut wedges from the tubes to allow for bending knees / arms.

Remember: stuffed arms and legs of amply sized clothes do the trick as well. for some designs even better!



Alternative body shapes are easily possible. The following alternative is rather flat in construction, but can be shaped and padded easily. Do not forget to thread a string with a massive knot at its lower end through the neck-hole before mounting the breast and back plates. The plates can be glued and stapled / nailed or screwed to the rods.

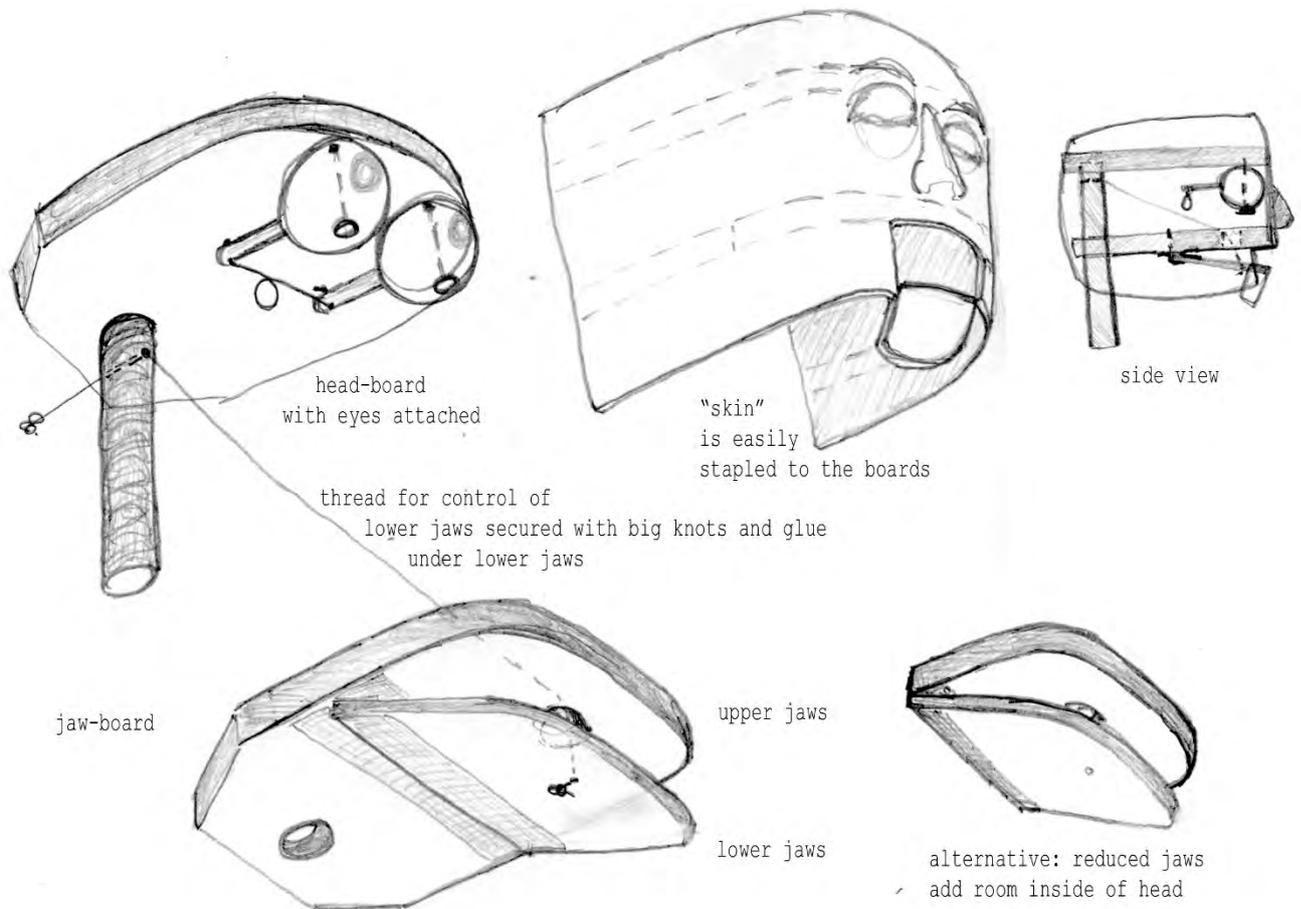


Head:

Think of the shape of the head and it's dimensions in relation to each other.

The upright / vertical construction is made from cardboard and a length of wooden rod, the horizontal is built around a bit of wooden board that is shaped accordingly: round/oval/square...

With large heads, avoid too much wood to save on weight! Hoops or other frames will do the job as well – remember to plan in where to mount the grip / control for the eyes and the jaw – if you want these.



A pattern for the head needs to be adjusted for individual facial dimensions that do to meet the desired measurements. Depending on what you are after and how many puppets you build, all this can be done easily by hand. Remember to do the head's box to the form and shape that you need for your figure.

Below is an image from Malmö Stadsteater's puppet workshop that shows crucial stages in the building of a puppet's head. They obviously have a proper budget and cut the "skull" with the help of a laser cutter. Check out their design and building process here (the images speak for themselves, in case you cannot read the text in Swedish): <https://www.malmostadsteater.se/om-oss/bakom-kulisserna/dockverkstad-pa-teatern>



(image by Emmalisa Pauly, Malmö Stadsteater)

Prepare a shell for the head based on the desired placement of eyes and ears etc. From there you can continue to prepare the inner structure (wooden board for the basic form of the head, fixing the eyes etc.)...



If movable eyes are put in, decide on the direction of movement: up-down or sideways.

If sideways movement is intended: drill holes in the back of the eyes to place dowel-pins / nails / other axes that protrude backwards. This works fine with table tennis balls and other plastic finds, too, there is no technical need for wooden eyes, really!

Mark them so that they are equally long to ensure synchronised movement of the eyes. Connect them to each other with a firm wire or bit of thin rod, so that their movements are synchronised. Plan in some grip so that you can keep hold of the eyes to prevent accidental movements when using the puppet in action. Depending on left- or right-handed use, you might want to place the handle accordingly closer to one side of the connecting rod / wire.

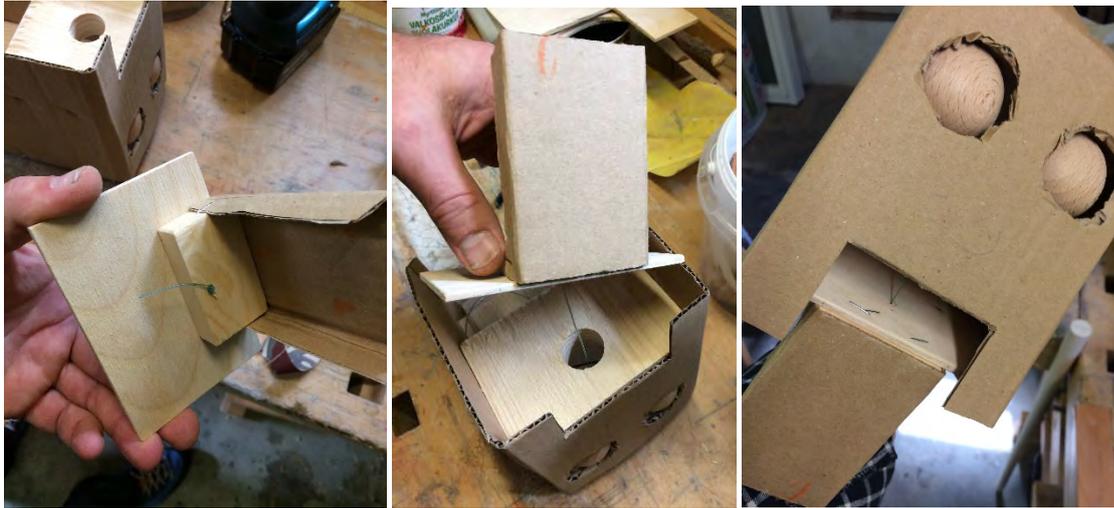
Drill a socket into the wooden board for the handle / upright rod with little but safe distance to the eyes' control. Remember: the wooden board is later on top of the eyes – these hang from it and so does the rod protrude downward, too, as soon as the head is assembled.



Prepare the cardboard wrapping / skin for the head, start marking the placement of the eyes and go downward to have enough room for a possible nose and upper jaw. If you want a movable lower jaw, you need to build in a fitting upper jaw, so that you can hang the lower jaw from it. Drill a large hole into the upper jaw to allow for mounting some control for the lower jaw. Wrap the head in its skin and fix it with staples to the boards:



Cut the lower jaw from thin plywood / sturdy cardboard. You can use some end of a wooden board, but that will drop a lot because of weight when playing. Prepar some fixing point for its control, usually some thread / wire / thin dowel that will go upward into the head to control jaw-movements from there. Build in the lower jaw by taping its backward edge to the upper jaw . Make sure that it is moving easily and that it is not too wide for the intended head's shape (a wide jaw looks distinct, you might not want a "nutcracker" face).



Insert the head's handle / upright rod into its mount. Fix it to the head with glue and a screw through the wooden board into the rod's top.



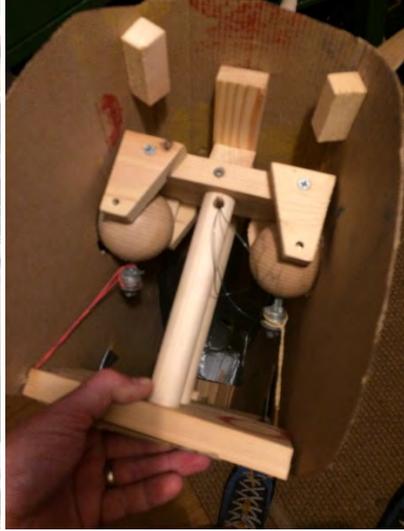
Connect the control for the lower jaw to the handle. By pulling the thread towards the handle, the jaw is pulled close / upwards. Fix the thread not permanently, so that it can be adjusted when necessary.



Connect the head to body with string or similar – nothing permanent to allow for easier access for repairs and adjustments. Test the figure's movements. Improve and stabilise wherever necessary. Remember: these are prototypes and not as sturdy as puppets for massive use. If you plan for that, make them more sturdy in their construction.



Alternative body- and head shapes are easily possible. Use the cardboard wrapping to give stability and form. Depending on the head's shape, build a reduced mount / wooden structure. The construction-principles described above work as well with less wood. Think of the placement of the upright / handle and its mounting / fixing to the cardboard shell first, and construct the head around these.



Test alternative materials and how these make the figure develop character traits or even individuality. Don't keep them simple types!

