Bothy Gallery and Open Air
JAMES CAPPER: DIVISIONS
05.01.13–14.04.13

YSP

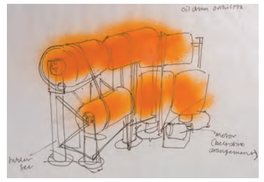
JAMES CAPPER: INTERVIEW

James, thank you for sharing your fascinating sculptures with Yorkshire Sculpture Park, where it is interesting to think about your work in the context of traditional sculpture themes such as space, form and material. I'm curious as to how you began making your sculptures, is it something that grows from your childhood?
I worked for a man called Charlie Goldup, the village mechanic, as a Saturday boy from the age of twelve to sixteen. From thirteen I also worked with the local farmer John Arthur. He had a large arable farm in Kent, where I grew up, and I learnt a lot about operating heavy equipment. To galvanize this early knowledge I worked from the age of sixteen to eighteen with steel fabricators to learn welding methods.

And how was this developed while you were a student?
While I was studying for my BA at Chelsea College of Art I realised that there was potential in the idea of steel sculpture that could be mechanised to move, in an installation environment. It wasn't until I made *Ripper* in 2009 that I realised that I was dealing with divisions in my sculpture such as carving and earth-marking.

An early idea of yours, *Dancing Oil Drums* (2006), reminds me of pieces by Marcel Duchamp, Jean Tinguely and Alberto Giacometti. How important to you is the art historical tradition of automated sculpture?
I made this drawing during my BA degree. I was influenced by Tinguely, David Smith and Richard Wilson, who I worked with for a week on his Barbican Curve Space exhibition. The history of mechanised sculpture could go as far back as Leonardo da Vinci, the original inventor and artist. It is reassuring, in terms of the direction of my development, to look back at the history of these artists in sculpture. Working with Richard Wilson proved to me that, as a sculptor, there are no rules but your own, that there is a world of technology out there, much of which is seen as

Jean Tinguely *Fatamorgana, Méta-Harmonie IV* 1985



James Capper *Dancing Oil Drums* 2006
Pen and spray paint on paper, private collection
Photo: Jonty Wilde

obscure to the art world. The artist, through research and experimentation in these 'obscure' fields, can become a specialist in contemporary fabrication methods and materials. The combination of real ideas with a hands-on approach to problem solving holds the studio and the sculpture together.

And in 2009 you made a series of collages of machines, are these composites of commercial equipment or entirely from your imagination?
It's interesting that these collages look like they were made by me adjusting images of machines. They are not adjusted – I simply cut the images out of photographs. I wanted to demonstrate the obscurity of the machines. The images made me interested in the work of Robert Gilmour LeTourneau (1888-1969) – he did not build according to the rules of mechanical engineering, he had to re-write the rules to make his ideas come alive. His problem solving was immense, it still shocks me looking through the man's archive that he could produce all these ideas in one lifetime. He is a huge influence. He was an ideas man, putting thoughts into reality and letting others refine his concepts. I feel that it is very important to bring new ideas to art, rather than re-treading familiar paths and recycling old techniques. LeTourneau is as important to me as any great artist that has broken down barriers. The operation of a machine becomes a performance, and the building of the machine is a demonstration of what mechanical engineering can achieve in sculpture.

It seems that the plans and models for sculptures with legs, such as *3 Legs*, *4 Legs* and so on [room 1] are the foundation works for subsequent projects?
Yes I have a growing interest in walking machines. It is partly due to becoming bored with wheels or caterpillar tracks. A Scandinavian company TimberJack made a very interesting walking tree harvester. There is very little information about it. I have

James Capper *Series RS40 Revolving Sitoevl 1956*
2009, collage on paper. Photo: Jonty Wilde

LeTourneau prototype excavating machine fitted with orange peel type positive-pressure grab bucket operated by geared racks, Longview plant, 1964

researched many machines like this to find that they never really get to the production stage, due to the difficulty of making new parts and finding the skills, perhaps even due to pressure from tyre companies who don't want to see their market destroyed. It would be a great adventure to take *4 Legs* or *Mountaineer* [room 3] up into the Himalayas and work with the filmmaker Hector Castells Matutano to document it.

And please can you explain a little how you categorise your sculptures?
I categorise my sculptures into divisions: *Earth Marking*, *Carving*, *Offshore* and *Material Handling*. Doing this helps me to keep focus on the problems that are inherent to specific machines. This helps me narrow down ideas, as well as encourage cross pollination between divisions. For instance the *Ripper Teeth* are used predominantly on the *Earth Marking* machines like *Exstenda Claw* and *Midi Marker* [open air]. Cross pollination means the teeth designs can be smaller, lighter and extruded on a carving machine like *Nipper*, which is in a totally different category.

The *Earth Marking* division, to me, relates to the Land Art movement that began in the late 1960s, not only because of the interventions you're making in the earth but also due to how Land Art is made. I'm thinking particularly of images of Robert Smithson making his famous work *Spiral Jetty* (1970). Is this a conscious reference?
I can see the comparisons in this particular division of my work, but I'm also interested in making my own tools to do things that have not yet been done. Earthmoving is an interesting area of engineering for me. I think highly of the work of Smithson and also Michael Heizer, who uses dynamite and yellow steel to create his art.

And the way you make your sculptures links to the use of industrial materials and methods, as pioneered by the Spanish artist Julio González and later developed by Sir Anthony Caro,

Robert Smithson *Spiral Jetty* 1970
Great Salt Lake, Utah. Mud, salt crystals, rocks, water
1500 feet long and 15 feet wide. Photo: Clara Zevi
Collection: DIA Center for the Arts, New York

Robert Smithson making *Spiral Jetty*
Photo: Gianfranco Gorgoni

Mark di Suvero and others. How important is it to you that you work with the materials and tools yourself?
Hydraulics are one of the most powerful industrial applications for movement. They move in a graceful and steady way. I have always admired the movement of heavy equipment that utilises hydraulic components. At some point in the future I would like to start making all the *Ripper Teeth* out of Hardox steel plate, rather than the mild steel I have used in the past. Hardox steel is far harder wearing for *Earth Marking* applications. I'm making my own tools in the *Carving* Division. I use the technology of small-scale hydraulics to create hand-held power tools [YSP Centre]. These tools can be used to make carve marks into plaster blocks. The point is that they could be used by sculptors to make sculpture, or by engineers to cut through concrete. I want to pioneer things, others can polish the ideas and clean up the rough edges.

And colour seems to be important in both your sculptures and works on paper. How does this relate to, say, the painted sculptures of Caro and Phillip King, or commercial associations, such as JCB yellow?
Hi-Way Yellow was used on construction machinery in the USA by Caterpillar in the 1930s, so that they could see the large, cumbersome machines on the work site. The colour is bright against tarmac, earth, grass and rock, and still holds colour when covered in mud grease and oil. Cabs were often painted white before the days of air conditioning, this kept the operators relatively comfortable in the Californian sun. With this in mind I set about colouring the *Earth Marking* division this colour, it seemed sensible to colour-code divisions in the work, as Caro did. Colouring steel is something that I like to do, and have to do to preserve it and make it visible. Many of my works are made for the open air, so don't have the gallery's white walls and grey floor to bring them out. It is an interesting set of decisions when it comes down to choosing a colour scheme for a particular machine. I like to stick to utilitarian choices.

How did the walking sculptures evolve into the *Offshore* ideas?
I have always loved speedboats, fishing vessels, tug boats and oil rigs. When I started welding it opened my eyes to what you can float on water. Displacement is a very interesting theory: many of the *Earth Marking* machines like *Tread Toe* and *Ripper* have a distributed ground pressure displacement to help them move around. A steel ship obviously displaces water to float, along with moving through it, a lot like *Midi Marker* moving through earth to propel itself forward. *Sea Light* [room 3] was a great task to overcome from an engineering perspective. Many things fascinate me about water, and how we move on it and through it. My *Earth Marking* division semi-swims through earth, if you think of the *Ripper Teeth* and their sub-soil manoeuvres of mark-making. The biggest project I have planned is *Walking Ship* – a 300 ton, walking light cargo ship (a Coaster) that utilises four, 150 ton capacity knuckle-boom hydraulic cranes to lift its hull out of the water, walking a bit like an alligator up the beach. The idea is that the ship will have a studio in its cargo hold for building experimental offshore sculptures, which could be tested afloat and sub-sea. It would be able to access areas un-navigable for ships of the same size.

How important is the opportunity to research on site at YSP?
It is vital for the testing and research of *Midi Marker*. It means I can also experiment on the other two machines, particularly into possible attachments. As a sculptor based in London it is rare for me to have the luxury of field testing, or the space I need to film demonstrations. To be able to use the park as an open-air studio is an incredibly liberating feeling for a sculptor.

And where might this research lead?
I'm constantly developing ideas as drawings, maquettes and machines. *Mountaineer* would be an incredible project to get on with, but I still need to find funding. *Mountaineer* would tower over *Tread Toe* – the machine weighs eight tons and has a fully-glazed operator's cab, runs 16 hydraulic cylinders and is powered by a 4 cylinder turbo-charged diesel engine. At the moment, though, I'm working on four new power tools, some smaller hydraulic maquettes and some drawings for a machine that can climb up the side of oil tankers, using four telescopic legs with electromagnetic pads. I also have some small blocks of blue foam in the corner of my studio that should be carved hollow and connected to electric duct fans, so to fly. Something I've been meaning to get on with now for quite some time.

Your sculptures are becoming increasingly complicated but, we can see from the evolution of your ideas, they grow from simpler techniques that we can experiment with. What's your advice to anyone hoping to make their own mechanised sculpture?
Mechanical parts inside a machine work together in a sophisticated way, but when the machine is stripped down to its individual parts it becomes easier to understand how the whole thing works. This process also gives you ideas about how you could make it better. The functioning maquettes, like *Mini Marker*, are great examples of this. They have just a single linear hydraulic function that makes them walk across their plasterboard tracks, leaving marks behind. I learnt a lot from watching machines all through my life, from sitting on the gate, to driving a forklift in the fabrication shop, through to operating a five-ton excavator with my *Ripper Teeth* at Modern Art Oxford last year. Hands-on experience teaches you fast, effectively, and allows mistakes to happen that you never forget. These mistakes can often lead to great ideas for even more advanced machines. I have been working with hydraulics for four years. It has been an intense amount of learning, surprises happen all the time, some can be great, others can be bad. Previously the machines used electric motors, which would power winches like *Ripper*. These machines were much more unreliable, they would break down all the time, whereas the hydraulic machines work well in all weather conditions, bar the odd hydraulic oil leak. Things that move mechanically have a life-span, which some artists, critics and dealers might find difficult to accept. Art for a lot of people is immortal, but in the case of the machine, parts wear out and engines seize up if not serviced regularly. Machines need humans to feed them fuel and keep them mechanically sound. This is something, like ergonomics, that one has to consider as a sculptor on the knife-edge between art and engineering.

James Capper and Helen Pheby
September 2012

Anthony Caro *Midday* 1960
Steel, painted yellow © Barford Sculptures Ltd.

Richard Wilson *Turning the Place Over* 2007-11
European capital of Culture Project, Liverpool

JAMES CAPPER: EVENTS

James Capper is undertaking research on Longside between 7 January and 7 February.

There are free demonstrations of his sculptures in the open air on Sundays 13, 20 and 27 January and 3 February between noon and 3pm, please drop in.

There is an in conversation with James Capper on Saturday 13 April at 3pm. £5 including drinks reception. Please book via ysp.co.uk

Bring your sculptures or designs for sculptures to a celebration with the artist on 14 April 2014. For inspiration and ideas to help with making please visit ysp.co.uk

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