ThingMaker: The Practitioner of Function and the Studio as Laboratory

Luke Hart
September 2012

lukehart.co.uk
**Table of Contents**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Illustrations</td>
<td>3</td>
</tr>
<tr>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>Rancière and the Aesthetic Regime of Art</td>
<td>4</td>
</tr>
<tr>
<td>Rancière and the Conflating of Work Making with Image Making</td>
<td>8</td>
</tr>
<tr>
<td>Minimalism and Developments in Function</td>
<td>11</td>
</tr>
<tr>
<td>Undoing the Aesthetic Image: The Proto-Functional</td>
<td>15</td>
</tr>
<tr>
<td>Heidegger and the Thing</td>
<td>20</td>
</tr>
<tr>
<td>The Functional/Conclusion</td>
<td>21</td>
</tr>
<tr>
<td>Bibliography</td>
<td>24</td>
</tr>
<tr>
<td>Appendix: An Interview with James Capper (courtesy of the artist)</td>
<td>25</td>
</tr>
</tbody>
</table>
List of Illustrations

figure 1
Pablo Picasso Violin and Candlestick
1910, Oil on Canvas
San Francisco Museum of Modern Art

figure 2
Paul Cézanne Basket of Apples
1895, Oil on Canvas
The Art Institute of Chicago

figure 3
Ben Alun-Jones Sarah
2012, 3-D photo scan
Courtesy of the artist

figure 4
Ernesto Neto Leviathan Toth
2006, Lycra Tulle, Polyamide Fabric, Styrofoam Balls
Tanya Bonakdar Gallery

figure 5
Tim Hawkinson Überorgan
2000, Plastic Bags and Tubular Ducts
Massachusetts Museum of Contemporary Art

figure 6
James Capper Ripper Teeth in Action
2011, Steel and Excavator
Modern Art Oxford

figure 7
James Capper Midi Marker
2012, Painted Steel, Diesel Engine, Hydraulic System
Hannah Barry Gallery
ThingMaker: The Practitioner of Function and the Studio as Laboratory

Much of the debate about what one considers being a work worthy of attention will come down to taste. We are unable to construct an aesthetic theory which will bind our and future generations to a form of art, or thing, or type of human making, indeed as technology changes human making tastes change with it. However, a debate based around tastes of individuals and times is a healthy debate.

‘All art is quite useless,’¹ Oscar Wilde said in the preface to The Picture of Dorian Gray, in 1890, and this has since been largely accepted as true. This paper will set out to examine this claim and its relationship to Jacques Rancière’s replacement of the representative regime of art with the aesthetic regime of art, and to present a methodology of working with pragmatic and functional art-work, as a method of moving beyond the aesthetic regime of identifying works of art. The challenge to this notion rests on the structure of the aesthetic regimes criteria for identifying works of art. The paper will examine these criteria, in relation to sculpture, and re-examine some earlier works of art and their overlooked and sometimes-accidental contributions to technology. (e.g. the theoretical invention of 3-d modeling through the experimentation of analytical cubism) It will then look at the current method of creating functioning works of art that blur the lines between the utilitarian, or practical, object and the work of art. The paper will finally suggest that a practical and real method for breaking from the aesthetic can be found in applying the functional and pragmatic to the notion of the work of art. Through function and genuine innovation, one can aim to redefine the art object’s place in culture. Practical science has two main branches in applied and pure (sometimes seen as pointless, but where much true useful innovation takes place) by conceiving of the studio as the pure science branch of material, and object based experimentation, the studio can become a laboratory for the type of research and development which capitalism and industry are not capable of.

Rancière and the Aesthetic Regime of Art

Jacques Rancière constructs the aesthetic problem through a series of regimes that exist to identify works of art. He states that previous to the current regime there existed a regime dependant on how a work represented something of the world, what he calls the Representative Regime of Art, and that this has since been succeeded by what is known as the Aesthetic Regime of Art. In The Future of The Image Rancière states, that ‘There is no art without eyes that see it as art,’² he is establishing the idea of the autonomy of the work of art at the birth of the Aesthetic Regime. The theory that the arts were discovering shared qualities, and this theory’s role in the development of the singular and autonomous work of art is part of the foundation of the aesthetic regime. He goes on: ‘Art as we call it has existed for barely two centuries. It was not born thanks to the discovery of the principle shared by the different arts…It was born in a long process of rupture with the system of beaux arts –

that is, with a different regime of disjunction in the arts. Rancière argues that the developments of painting in the late 19th and early 20th centuries are often seen as the major break how an art work is judged but that this break which involved the creation of the concept of the autonomy of the art work, be it a painting or a novel.

To establish what the criteria are, which the aesthetic regime uses to identify works of art, it is important to understand the representative regime. Rather than a regime that prided realistic representation

the representative regime in art is not one in which art’s task is to fashion resemblances. It is a regime in which resemblances are subject to the triple constraint that we have noted: a model of visibility of speech that at the same time organizes a certain restraint of the visible; an adjustment of the relations between knowledge-effects and pathos-effects, governed by the primacy of the ‘action’, identifying the poem or painting with a story; and a regime of rationality peculiar to fiction, which exempts its speech acts from the normal criteria of authenticity and utility of words and images, subjecting them instead to intrinsic criteria of verisimilitude and appropriateness. This separation between the rationale of fictions and the rationale of empirical facts is one of the representative regime’s main elements.

The aesthetic break therefore does not occur when the impressionists decide that paint is more important than image (which it is doubtful was their opinion) or later when figurative or landscape image is banished from painting, but with genre painting of familiar real life scenes, and with literary events such as the publication of Madame Bovary.

Establishing artistic autonomy also involves a merging of the genres. Rancière’s definition of the aesthetic regime of art from the glossary to The Politics of Aesthetics states that:

The aesthetic regime abolishes the hierarchical distribution of the sensible characteristic of the representative regime of art, including the privilege of speech over visibility as well as the hierarchy of the arts, their subject matter, and their genres. By promoting equality of represented subjects, the indifference of style with regard to content, and the immanence of meaning in things themselves, the aesthetic regime destroys the system of genres and isolates ‘art’ in the singular, which it identifies with the paradoxical unity of opposites; logos and pathos. However, the singularity of art enters into an interminable contradiction due to the fact that the aesthetic regime also calls into question the very distinction between art

---

4 Ibid. p.120.
and other activities. Strictly speaking, the egalitarian regime of the sensible can only isolate art’s specificity at the expense of losing it.\(^5\)

Only once an aesthetic regime of art, is established can art be judged to exist within that regime. But this regime is inherently flawed, in that by promoting the singular form of ‘art,’ in terms of the autonomy of the artwork, art must therefore lose it’s position above other forms of making or seeing, and the regime must collapse.

Previous to the nineteenth century an artwork had a specific role, or function in that it was part of the representational role of a specific type of image making. Indeed the establishment of the aesthetic regime required that art as an autonomous and functionless concept be created. This function took on many social roles, from education to propaganda, but all of these functions were comfortable within the representative regime of art. Through the nineteenth and twentieth centuries this regime has been replaced, through processes as varied as the invention of chemical photography to the shift in literature to novelistic realism, and the redistribution of the ability to make important images. An important way to look at it is the eventual triumph of genre, or landscape painting over history painting. Under the representative regime, history-painting triumphs because it establishes the rules of what stories are important, and therefore worthy of consumption, under the aesthetic regime more familiar, or ‘real’ images triumph, as any subject matter, is elevated due to its autonomy as a work of art.

The Aesthetic Regime “grasped and conceptualized the fracturing of the regime of identification in which the products of art were perceived and thought, the rupturing of the model of adequation between poiesis and aisthesis established me the norms of mimesis. Under the name of Aesthetics, they above all grasped and conceived a fundamental displacement: namely, that the things of art would henceforth be identified less according to criteria of ‘ways of doing’, and more in terms of ‘ways of sensible being’.\(^6\)

So what are the criteria that the aesthetic regime of art uses to identify a work of art? We must begin with the concept of autonomy. Modernism is identified strongly with the notion of the autonomous artwork. This is notion of the art work is what Rancière defines as the ‘happy model of the autonomy of art, where the artistic idea in translated into material forms, by short circuiting the mediation of the image’ This sets up the most basic of the aesthetic regime’s criteria. This is the work of art that is freed from the three constraints established by the representative regime and highlighted above. ‘Pictorial non-figuration is preceded by something seemingly quite different: novelistic realism…the emancipation of resemblance from representation.’\(^7\)

\(^7\) Jacques Rancière, The Future of the Image (London and New York: Verso, 2007) p.120.
The autonomous artwork is one which ‘does not make visible; it imposes presence. But this presence is itself singular… It exhibits its particular opacity, the under-determined character of its power to “make visible”. And such under-determination becomes the very mode of material presentation specific to art’.\(^8\) The happy model of the aesthetic regime is one in which an artwork is judged by its ability to create its own presence, and that acknowledges that it does have the power to make something clear or visible, or true, while attempting to do just this.

‘There is also the tragic model of the “sublime”, where by contrast (to the happy model) sensible presence manifests the absence of any commensurable relationship between idea and sensible materiality.’\(^9\) This would seem based on recent trends within art being made today to be the less discredited of the aesthetic regime’s methods of identifying works of art. Current practitioners don’t often claim autonomy for their works, but it does happen that work will be claimed to make an attempt at understanding the sublime, while acknowledging that the work in fact can not truly begin to grapple with such an idea that is inherently to big, if it is at all real. This double claim is commensurate with the demands of the aesthetic regime. As Rancière states earlier in *The Future of the Image*:

> This involves not so much recounting the event as witnessing to a *there was* that exceeds thought…Thus…the existence of events that exceed what can be thought calls for an art that witnesses to the unthinkable in general, to the essential discrepancy between what affects us and such of it as our thinking can master. It is then the peculiarity of a new mode of art – sublime art – to record the trace of the unthinkable.\(^10\)

Rancière is talking here about the claims made by some that some things are unrepresentable, and that therefore there must be an art that can deal with the unrepresentable. This art that deals with the unrepresentable must acknowledge that it cannot represent its subject matter, it therefore must find another way in which to bring presence to the work. Here the notion of the sublime inserts itself, and art must deal very clumsily with such a notion. ‘It is no longer the simple impossibility of a substantial thought finding adequate material form. It is the empty infinitization of the relationship between the pure will to art and the things – which can be anything – in which it asserts itself and contemplates its reflection. The polemical function of this Hegelian analysis is clear: it aims to reject the notion that another art might be born out of the dissolution of the determinate relationship between idea and material presentation.’\(^11\) If things seem contradictory here it is because due to the nature of the aesthetic regime contradiction abounds in the theories surrounding identifying artworks.

---

The assertion of unrepresentability claims that some things can only be represented in a certain type of form, by a type of language appropriate to their exceptionality. *Stricto Sensu*, this idea is vacuous. It simply expresses a wish: the paradoxical desire that, in the very regime which abolishes the representative suitability of forms to subjects, appropriate forms respecting the singularity of the exception still exist.\(^\text{12}\)

I will end this section with one final quote from Rancière’s *The Future of the Image*:

Such is the paradox of the aesthetic regime in the arts. It posits the radical autonomy of art, its independence of any external rule. But it posits in the same gesture that abolishes the mimetic closure separating the rationale of fictions from that of facts, the sphere of representation from other spheres of existence.\(^\text{13}\)

**Rancière and the Conflating of Work Making with Image Making**

At the end of the last section we examined some of Rancière’s claims about the criteria of the aesthetic regime of art. In *The Future of the Image*, Rancière focuses much on photography and the image. Much of the problems tied up with the criteria of the aesthetic regime, come from the over emphasis of photography as the leading means of making images, and thus art. If we conflate art and image making, then we do so at the risk of ignoring some of the most important developments in sculpture of the second half of the 20\(^{\text{th}}\) century. ‘It is what emerges in the contemporary stress on distinguishing the genuine image from its simulacrum on the basis of the precise mode of its material reproduction.’\(^\text{14}\) This is simply one example of the ways in which image making, a process intimately linked with both art history, and much contemporary practice, is taken to exemplify a unifying theory in all of art making.

Rancière does begin to suggest a third method or criteria of the aesthetic regime in identifying a work of art towards the end of *The Emancipated Spectator*. He has been speaking about specific examples of photography in the essay *The Pensive Image*:

Now, our examples make it possible to conceive a third way of thinking about the aesthetic break: it is not the abolition of the image in direct presence, but its emancipation from the unifying logic of action; it is not a rupture in the relationship between the intelligible and the sensible, but a new status of the figure.\(^\text{15}\)

---


\(^\text{13}\) Ibid. p.123.

\(^\text{14}\) Ibid. p.9.

For him the subject if always the image, the figure, it is inconceivable that there can be something not related to the image. He goes on to describe the last sentence from Balzac’s *Sarrasine* in which at the close of the novel the character ‘remained pensive’. Rancière takes this as a break in self-contained representation of the old regime, but he goes on to describe a method of seeing a work of art which straddles both the representative and the aesthetic regimes of art, due to ‘this intertwinement of two logics which is the presence of one art in another.’ It seems unsurprising that a regime of identifying art works as infused with contradiction, as the aesthetic has proven to be, would be unable to break wholly with the regime that preceded it, and I would posit that it indeed has not. Rancière’s claim of this as a method of transgressing the aesthetic regime, by accepting the links to the representative fall flat because rather than transcend the problems of both, it links all of the problems of both. He continues to look solely at image making, which must be directly linked to representation and denies the broader view opened up in the second half of the 20th century by many works in sculpture.

Had sculpture remained a method of transforming one material into a three-dimensional image of another form, it would have been required to abide by the same rules as other forms of image making. However the materiality of sculpture, and the nature of works in the second half of the twentieth century have begun to establish another method of existence for sculpture, one that will be examined further below. Outside of the art of image making, defunct by the very nature of the aesthetics that criticize it, however a form of making similar to what was called sculpture has developed. This evolved from the abstract painting, and Clement Greenberg’s assessment of it, which Rancière dismisses. This dismissal is likely apt, but it ignores the steps which were taken by those dissatisfied with autonomous painting; it is only at the moment when this work leaves the wall that the potential at which it hinted began to be realised. This form of making is directly related to the rest of the built world, and allows for the direct physical function (rather than its philosophical function or social function) of the object to allow the made thing to retain its truth without becoming image or simulacrum. Much of the end of this paper will try to explain and name this new form of making, and its development from the remnants of late modernism, through minimalism, and its rejection of late twentieth century cynicism and irony.

It will be helpful if we look briefly here at the work of Richard Serra in relation to this problem, and as a precursor to what we will discuss later. Serra’s work built heavily on the sculptural developments of minimalism, he stated in a 1991 conversation with Alan Colquhoun, Lynne Cook, and Mark Francis, that:

---

American minimalists created the ‘specific’ object, what was supposedly free of ‘meaning’ and allowed for the content of perception to reside in the viewer’s relationship to the object and its place of installation. The ‘specific’ object led to work that completely destroyed the notion of the object by emphasizing its interrelationship with a given site. When site and work become inseparable it implies that the perception of the work does not remove us from the real world but rather involves us in it. One of the most important developments of the last twenty years is that the notion of the autonomous object, where content is locked up within the boundaries of the art work, has been abolished, and the work could become the vehicle for a critique of its context.  

It is important to note that Serra abolishes the notion of the autonomous work of art. His work is not meant to be evaluated on those terms, it is not simply one self-contained object; it is a relationship of pieces of metal, and a critique of, or conversation with, the space around it. His work does not attempt to say something about the sublime, the processes in which large plates of steel are made, and large pieces of iron are formed, are ones which Serra has intimate knowledge of. His work is not image based at all, it is about the physical reality of the material, and its weight. This type of Sculpture does not fit with Rancière’s image based view of how to identify art works.

To see something as art, be it a Deposition from the Cross or a White Square on White Background, means seeing two things in it at once. Seeing two things at once is not a matter of trompe-l’oeil or special effects, it is a question of the relations between the surface of exhibition of forms and the surface of inscription of words.

Rancière seems to step backwards to describe all art as images, and to deny the existential reality of some works of sculpture in relation to space. There are not two things to see in it. We know of the contradictions which Rancière himself points out within the aesthetic regime of identifying art works, part of the goal of the specific object was to move beyond these contradictions.

Now the specific object does not signify the end and the ultimate goal of sculpture, this is not something that is possible. There are still troubles with the specific object’s relationship to being an art work, and to being something outside of an art work. If one accepts the contradiction in theory, and the contradiction of the specific object’s purpose, where does one position oneself as an artist or a maker?

---

Minimalism and Developments in Function

I’d like to turn to the development of the specific object and of minimalism through the work of Donald Judd. Judd’s sculptural work in the 1960s sought to further break the ties of art to the representational and the illusionistic. Judd began his career as a painter, but soon began making series of simple constructed boxes, that were mounted on the wall or rested on the floor. This was an attempt to make an object that was true to itself, in the sense of being simply what it was and nothing more. This was an abolition of pictorial, and sculptural metaphor. He states in his 1965 essay entitled *Specific Objects* that:

So far the most obvious difference within this diverse work is between that which is something of an object, a single thing, and that which is open and extended, more or less environmental. There isn't as great a difference in their nature as in their appearance, though.\(^{21}\)

Object is his term, thing seems more appropriate. Though Judd resisted the label of minimalism, his has become inextricable from the type of work associated with it. What he, and others, at the time were trying to understand of their new work was its attempt at an existence as being things rather than works of art. This was a very important step in both the development of a more honest form of making and in the trajectory of the aesthetic regime of art. Judd no longer even wants to refer to his three-dimensional work as sculpture. ‘Since sculpture isn't so general a form, it can probably be only what it is now—which means that if it changes a great deal it will be something else; so it is finished.’\(^{22}\) Sculpture did change, but it did not finish.

Much more contemporary art is referred to as sculpture than any other form, this is a term of convenience, as sculpture became a much more broad term, instead of fading out as Judd predicted. Judd also predicted, that ‘Since its range is so wide, three-dimensional work will probably divide into a number of forms.’\(^{23}\) This is indeed what happened, and much of this work has been categorized under the now broad term of sculpture, a term which is not accurate given the new sculptural practice, which we will describe later. The division into a number of forms however, given the abolition of the autonomous object, still required that a work have a sort of presence in the view of the aesthetic regime, or as Judd put it: ‘A work needs only to be interesting.’\(^{24}\) This desire for interest, or presence though has led many back to develop work as critique, as a method for introducing content into objects, and has led many to make the same conflation as Rancière of work making with image making.

\(^{22}\) Ibid. p.4. (in essay)  
\(^{23}\) Ibid.  
\(^{24}\) Ibid.
The developments of minimalism have been widely misunderstood. In a 1989 essay on Minimalism, the artist Michael Craig-Martin stated that:

When we assumed that radical and fundamental questioning of art and the invention of essentially new forms of language were basic to the nature of all new art, we were wrong. These ideas were, in fact, central to the art of that particular period from the late-50s to the mid-70s and can be seen now to have been the principle determinants of the character of the art of that time. In retrospect it is obvious that the pressure of fundamental innovation was unsustainable, that a period of ‘return to the old values’ would follow.25

He neglects to realize that the innovation of making as tied to artistic production never did in fact go away. He states that:

particularly in Britain ‘the new spirit of painting’ has essentially seen the consolidation of the reputations of those painters who have come to be known as the School of London, the character of whose work was already clear by the late 50s or early 60s, and who, I suspect, have never even thought of themselves in terms of radical innovation, a concept foreign to their conservative and romantic individualism.26

Craig-Martin ignores the nature of what David Hockney’s pioneering work in image making has given to the understanding of looking, and the radical experimentation of his photographic works, and multiple image collages, some of the only work of the period of which he speaks that functions as truly innovative work. His confusion is with image making as art, rather than the physical developments that are innovative in Hockney’s work.

In fact, Hockney’s work in this field relates back to, but furthers our understanding of, the revolutionary invention of 3-d modeling not with the advent of the computer, as is widely assumed, but in 1907 by Pablo Picasso and Georges Bracques. If we examine the developments of some aspects of this early 20th century art, which we have in the

26 Ibid. p.7
past viewed from a viewpoint of representing strictly autonomous work, what Rancière called the happy model of the autonomy of art, then we see that it can be linked out of art-making to a broader process of thinking about representation and image making separate from art. Working with the initial developments of Cezanne, in moving into the making of high analytical cubism these two artists were recording with the best of the technology available to them objects represented as three dimensional in two dimensional space, predating the use of 3-d scanning machines and computer modeling by nearly 80 years. (Indeed, 3-d images produced by new photographic scanning machines even look remarkably cubist, as figures 1, 2, &3 illustrate) The techniques developed through this method of thinking lead, ironically to a flattening of the picture plain in painting, but laid the first foundations for the later revolution in image making, and spatial representation. Yet his is work done around the time that the artist was at his most culturally powerful and self-justified, when the work was seen as totally autonomous, a time when the functionality of a work of art was not considered, a time in which the aesthetic regime of art has proclaimed the artist to be the artist but has not yet come to grips with its leveling of art to the plain of nature and the rest of human making.

Cubism was misunderstood by the many followers of Picasso and Braques, it has often been understood as simply a pictorial exercise aimed at flattening the representational space within a painting, yet its developments were so far reaching that we are seeing the representational qualities of them only over the past twenty years. Craig-Martin states that:

Radical Art never creates anything entirely new: it simply shifts the emphasis. What previously was un-important, taken for granted, invisible, becomes central. Minimalism seeks the meaning of art in the immediate and personal experience of the viewer in the presence of a specific work.27

The conceptualization of the specific object through minimalism and the objects/things themselves is more important than the simple shifting of the focus of the viewer or of representational space. Even though Cubism is directly linked with the history of image making and how it relates to art, it can also be seen as a precursor to the methodology of working that the minimalists and others used to set up conditions that can ultimately separate art from representation completely and truly break the aesthetic regime by working towards something outside of what is considered art.

The problem of the specific object was that, in requiring simply that a work be interesting, it allowed development of the ideas that lead to it to stop. It became sculpture and thereby completely changed sculpture. The specific object diverged, as Judd predicted, into many different forms, but gave up the exploration of form, in favour of the exploration of critique. Critique remained trapped by the aesthetic regime.

Critique, like metaphor, imbues things with properties that they do not possess. The goal of the specific object was to make things unencumbered by this falsity. Ranciere says that critical art is a means of attempting to politicize art, and by extension its viewers, through combining or juxtaposing sensory experiences to create a sensory oddity designed to shock a viewer into action.

But there is no reason why the sensory oddity produced by the clash of heterogeneous elements should bring about an understanding of the state of the world; and no reason either why understanding the state of the world should prompt a decision to change it. 28

Ultimately critique fails because it is a false idea thrust upon a work and not something inherent to the work. The goal of escaping the aesthetic regime cannot be achieved by the tools of that regime. Critique is the same hangover of representation that the specific object tries to banish when it banishes image and metaphor.

If we return to Richard Serra:

If the nature of the artistic endeavor is a questioning one, then the artists’ methods will accord with the endeavor. Richard Serra continually asks questions about his own work: what is it? how does it look? what does it mean? how is it used? Serra’s mode of sculpture is active, that is he is involved with the physical properties of things, and the traces that result from a manipulation of the materials. Serra is concerned with various activities and processes—propping, bending, leaning, rolling, sawing, splattering. He avoids illusion representation and especially construction in order to concentrate on what is being done. Since the emphasis is on the activity, the piece must be analyzed in terms of the kind of work that has gone into its making. Serra avoids permanently joining anything; thus, his lead pieces deal with a functional rather than formal relationship of parts. 29

This was written in 1969 about early Serra Wax sculptural works for an exhibition at the Whitney Museum of American Art, but it is as true of his later works in steel and other materials.

Serra’s work often focuses on site specificity, but I would prefer to look at the notion of how work can respond to the greater world and the built world, and how by the nature of how his work is put together, and how it exists, it points toward a different type of functional relationship of objects. His work is defined by the gravitational relationships between large pieces of metal, that they are large and metal matter only for the mass, and the weight that gravity therefore imbues them with. ‘The way that

my work differs is that it’s not opting for opticality as its content. The work has an existence that I would like to define as functional. It sits, it leans, it props, and this is its function. By fulfilling this basic function the work does indeed exist in relation to everything around it, but the key development, is a continuation of the specific object.

Serra himself may disagree with my classification of his work as functional: ‘I don’t think there is any possibility for architecture to be a work of art. I’ve always thought that art was nonfunctional and useless. Architecture serves needs which are specifically functional and useful.’ Here he is taking the generally assumed usage of the word functional in terms of use-value. Serra does seem at times to fall into the same trap of classifying his work in terms of critique. I would like to frame the functional in a larger context. This context is the one in which I have described the existence of Serra’s work: it sits, it leans, it props.

**Undoing the Aesthetic Image: The Proto-Funtional**

At a 2009 conference entitled *Undoing the Aesthetic Image*, held at Tate Britain, at which Rancière spoke, and in a subsequent publication in Radical Philosophy, Éric Alliez set forth a definition of a work of art that retains the notion of art yet challenges the Aesthetic Regime. The specific work in question was Ernesto Neto’s *Leviathan Toth* (figure 4) that was installed in the Pantheon in Paris in 2006. Neto’s installation consists of a large ‘body’ made of lycra filled with various light weight materials (polystyrene, lavender) so as to stretch and sag as it fills the space of the interior of the Pantheon. Alliez writes in this work:

> Metaphorization confers the status of a half-figurative, half-abstract image — and therefore the character of a description (such as ‘the innumerable suspensions of an inverted and parasitical forest’) — on what is otherwise unidentifiable and whose radical alterity, in relation to image-effects, poses the question of knowing if it is still of an aesthetic order.

Here Alliez is claiming the work’s lack of metaphor, and thus is rupture with the aesthetic, but this claim seems to be based on the work being read as a ‘body without organs,’ and that by nature of site ‘every kind of real distinction between form of expression and form of content is abolished.’ That he argues that Neto has been able to bypass the role of metaphor in the existence of this work, a work which utilizes both, a references to mythology and a deity, and a sculptural material stand in for flesh, in the form of lycra skin and ‘filling,’ is incorrect, material as stand in for flesh is a trope of representative metaphor. That he argues that it somehow transcends the aesthetic regime also falls flat. I see no way in which this work can be evaluated other

31 Ibid. p.104.
32 Ibid. p.236.
34 Ibid. p.27
than the established criteria of the aesthetic regime, criteria which we know to be contradictory due to their relationship to the previous regime of representation. Neto’s installation does little more than to suggest a metaphorical autonomous being, inhabiting a space, perhaps a strange uncanny, or attempting to approach the sublime, being, but certainly a metaphorical one.

Alliez accepts Rancieré’s notion of the aesthetic regime, and describes two modalities according to which the aesthetic has recently seen its objects and its stakes redeployed. In the first, aesthetic alter-ity is a disengagement from vision that engages the gaze in the genesis of visibility at the heart of the visible...In the second, the aesthetic is the de-figuring of every representative relationship between the sayable and the visible in the free play of forms–signs whose discourse defines forms of visibility as much as modes of intel-ligibility.36

Much of Alliez’s belief in the transcendent qualities of Neto’s work is due to its installation in the Pantheon, the secular temple of the republic of France, and a building very much associated with the political history of France, as well as revolutionary, and failed revolutionary, political ideals. ‘Consequently, Operation Neto modulates into a crit-ical and clinical operation. Critically, Leviathan Toth confronts the building and its sheer size and grapples with it by placing all its physical and metaphysical coordinates into and under tension. The operation thus engages with nothing less than the image of power related to the power of the image which animates it and gives it a discursive existence – because the architec-tural denunciation of the Pantheon produced by Neto doesn’t occur without the (Hobbesian) metaphysical enunciation that is projected onto it.’37

Tim Hawkinson’s Überorgan (1985) (figure 5) is a visually similar work to Neto’s Leviathan Toth, but one which aspires to break with the aesthetic regime in a much more ambitious manner. While this work did not have the grand historical venue of

the Pantheon, it was commissioned by the Massachusetts Museum of Contemporary Art and has been installed in the Getty Center in Los Angeles, amongst other sites, its very nature is more challenging than anything to do with its site. Alliez writes of *Leviathan Toth* that: ‘Between the critical and the clinical, the pathology of the Body without Organs can thus awaken the anoptic quality of the Body without Image in a biopolitics of space which dismisses every metaphor of the invisible.’

38 Überorgan dismisses metaphor in a much more real manner, rather than rely on titling or setting for the work to break metaphor Hawkinson allows the work to take on it’s own existential functionality, by having *it do* something. This something is a simple act of moving air around through inflated sacks, and making noise by doing so, but the relationship to the anatomical organ, and to the musical organ is not metaphorical, it is actual. This work exists in a state that much work has existed in over the past 20 or more years, that which can be defined as the proto-functional.

Contemporary work in the field of sculpture is beginning to address and expand on the proto-functional. If we think more broadly about the function inherent in new sculpture, then we come to the work of James Capper. *Ripper Teeth In Action* (2011) (figure 6) was a work presented by James Capper and commissioned by Modern Art Oxford in which Capper employed ‘a set of “ripper teeth” of his own design to work on sections of land around Rose Hill, Oxford…in order to explore their capacity for mark making’. This work comes from what the aesthetic regime would accept as art making, yet there is something troubling about what it is his work is capable of doing. The ripper teeth themselves, which we shall see, are sculptures, or works of art, exist in a balance between sculpture and tool. Capper is concerned with experimentation and functional development, of objects and tools that exist happily in worlds of sculpture and of industrial equipment. By placing the importance of art practice on invention, problem solving, and industrial and practical function, Capper is able to bridge a gap between the work of art and the functional use object. His work engages many in the manner of what we have called art; but for his own purposes as a practitioner it is an irrelevant question. ‘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.’

Perhaps we need to identify ways in which this must be classified as art. We can’t use Rancière’s criteria of the aesthetic regime here though, and therein lies the problem. We are not speaking of images, or of criticism, or of metaphor. Capper is not making autonomous objects, or sublime experiences. Perhaps we can identify it by what it is not. It is not industrial design, in the strict sense, design is focused on the visual appearance, and a balance of form and function. It is not pure invention, though it may be inventive; an industry comfortable and profitable in manufacturing, and distributing widely, machinery which operators are familiar with, will have little interest in radical shifts in locomotion. Capper himself expresses frustration at the pace of change within the industries in which he is interested. In an interview for an exhibition of work at Yorkshire Sculpture Park he said: ‘A Scandinavian company called TimberJack made a very interesting walking tree harvester. There is very little information about it. I have 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.’

Capper himself makes walking machines. One of his machines, such as *Midi Marker*, (2012)(figure 7) is both a prototype for what could potentially be a fleet of machines, in production, but each individual machine itself a single work, one connected to larger fabric of building, and machine building, but a single work at the same time. There are other experiments with walking machines within the field of art making, most notably Theo Jansen’s wind-powered beach walking *Strandbeests*, which function in a completely different way to Cappers, as Jansen states that they will one day ‘live their own lives’. This striving for autonomy in Jansen’s work, set it apart from Cappers, and points to why Capper’s is important.

---

Perhaps we have to fall back on the worlds in which his work is accepted and exhibited. As Rancière says ‘There is no art without eyes that see it as art’ Capper doesn’t work through a heavy machinery industry because it would be impossible for him to make what he makes in that industry. He exhibits in art galleries, and sculpture parks, and from time to time in public as in the project with Modern Art Oxford.

Richard Serra said in a 1983 conversation with the architect Peter Eisenman that, ‘to deprive art of its uselessness is to make other than art’ But we have been seeing growing use of function, and use, throughout sculpture since the specific object, including in Serra’s own work, albeit function in a very simple and true sense of the word.

Capper’s is work which is identified as art, but which Capper sees as the development of true use objects. Capper uses the studio and the landscape as a laboratory to build and experiment with machines and machine components that he believes to be genuinely useful in the locomotion of machinery, and the handling of materials for building purposes. If viewed, from the actual existence of the work, then it’s inclusion in an institution such as Modern Art Oxford, ensures us that the world will be viewing it as art, but its true function is industrial development, of a kind that Capper sees as impossible within the traditional practices of industry. It doesn’t follow Rancière’s criteria, it is viewed as art, yet it moves beyond the classification and frees itself from the Aesthetic Regime, via its functionality.

This functionality is the only way in which an object can continue to break from the tyranny of the image, and from the aesthetic regime. Rancière said that the autonomous object tried to achieve this autonomy by ‘short cutting the mediation of the image.’ Here finally there is no need for the mediation of the image, as the image has been abandoned because of its irrelevance to the functional truth of the object.

44 James Capper and Helen Pheby, An Interview with James Capper (Unpublished, Yorkshire Sculpture Park, 2013)
Heidegger and the Thing

Martin Heidegger tries to get to the nature of the difference between an object and a thing, and at the nature of what makes a thing a thing by examining the properties and faculties of a jug, or rather by examining a jug: Heidegger’s jug is a jug because it is self supporting, because it is made, it consists of side and bottom, or rather it consists of the void made by the sides and bottom.

Sides and bottom, of which the jug consist and by which it stands, are not really what does the holding. But if the holding is done by the jug’s void, then the potter who forms sides and bottom on his wheel does not, strictly speaking make the jug. He only shapes the clay. No—he shapes the void… The vessel’s thingness does not lie at all in the material of which it consists, but in the void that holds.

Yet we also know that the void of which the thingness of the jug exists is not a void, but filled with air, but ultimately this scientific knowing of the thing falls flat for Heidegger as well. He ultimately states that ‘Because the word thing as used in Western metaphysics denotes that which is at all and is something in one way or other, the meaning of the name “thing” varies with the interpretation of that which is—of entities’ and that ‘The jug is a thing insofar as it things. The presence of something present such as the jug comes into its own, appropriatively manifests and determines itself, only from the thinging of the thing,’ and ultimately the worlding of the world.

There is something interesting that Heidegger leaves out when confronting the scientific knowledge of the jug, and ultimately all things. Without the influence of the Earth’s, or another large body’s, gravity the sides and bottom, and the void of the jug the jug would be incapable of holding wine. It is through the jug’s gravitational relationship to the Earth that it has any of the properties of being a vessel. Indeed in the vacuum of space the void in the jug would indeed be a void, the atmosphere surrounding the Earth provides the air, which is replaced when the jug is filled with wine. Heidegger would have us know the thing as simply thinging, (or he would simply be happy for us to human) and would not have us be concerned with our relationship to the thing, or the thing’s relationship to anything else. Considering simply the thinging thing as the thing could thing in zero gravity, robs the thing of its properties, which we know from our experience of the thing, rather than our objectification of the thing. Gravity is not merely a scientific knowledge that we have, it is something that is experienced by every human being, and only not experienced by a very small minority of people. It seems important to consider things in terms of their relationships to other things, and to the systems and world in which they function. Heidegger does eventually reconcile the relationships between things into ‘their unifying presence, in which each one retains its own nature. So nestling, they

---

49 Ibid. p.119.
50 Ibid. p.120.
join together, worlding, the world. There is more that is commensurate with a scientific viewpoint and Heidegger’s than he acknowledges. The gravitational relationship is an example of this, at the atomic and sub-atomic level there are doubtless many more.

The aesthetic regime of art has acknowledged that it must by its very nature abolish the notion of art, yet it clings to art as the important and emancipating aspect of human making in the face of it. Attempting to resolve this contradiction has been very difficult, and has not yielded satisfactory results. The great mistake of this has been to conflate the image with the made thing, and to retain art as singular in the face of the impossibility of this. We know that the Aesthetic regime has declared that art cannot remain in place, and it need not, in fact, the made thing will be able to establish a level of truth impossible in art, as soon as it is viewed and conceived of from a viewpoint which does not hold art in place.

**The Functional**

It is often supposed that form and function are exclusive elements or separate properties to a specific thing. The form-function dichotomy is a fallacy, but it can be examined. It is a failing of both the representative and the aesthetic regimes of art to so divide these two basic properties of any object or thing. The representative fails by ascribing greater importance to the image depicted than to the physical paint and canvas, or marble, and the aesthetic failing at least initially by diving the functional object from the art object through the proclamation of autonomy. The contradiction of the aesthetic regime, the leveling of art and other human making does something to correct this error. In Serra’s work the functional existence of the work comes from the form, and evolves, in his work, from the action of the simple lead piece to the active existence of the steel works. He continues to avoid joining anything in the large steel sculpture, so that they exist by their actions, or simplified functions, of leaning, propping, etc. Each piece of steel has a functional relationship to the other pieces, and the whole has a functional relationship to the space around it.

Tim Hawkinson and others have furthered this approach in a different manner, by allowing the work itself to have a functional ontology, performing a temporal action of sorts. Current work in the sculptural field is pushing things further and further away from anything which would have been called art, towards things like engineering and design, but in very different methods and practices than those of engineers and designers. It is possible to envision practitioners who take these things into account when making work, when making things. We acknowledge the collapse of art, if we acknowledge the beneficial aspects of this collapse, then we are led to a practice that allows for experimentation, innovation, and the desire to create functional relationships and objects.

---

The problem now lies in this quasi-functional relationship to the rest of the world. Through breaking down the last barrier of art as functionless and the rest of human making. By considering art making as the making of functional objects, and placing the burden of the maker on the innovative, or inspiring qualities of that work, it is possible to develop work that is both art and utilitarian, that pragmatically exists in both of these states of functional existence. The form and the function speak to each other, and define each other. Heidegger’s Jug would not be a vessel capable of holding wine without all of the aspects that he examines, from the sides and bottom, (Formal? Functional?) to the void, (Functional? Formal?) to the thinging of it. None of these aspects of the thing can exist without any other.

We said that James Capper uses the studio as a laboratory. This laboratory is one in which research is not directed, but in which function is considered. But this is a designer, some may say. A designer is one who repackage something in a decorative sense; this is not what we are speaking of. Then this is an inventor, they may respond, an inventor works with a specific use function, to solve a specific problem, when we speak of the studio as laboratory, we are speaking of something more broad, something bigger than single-problem solving, and of function in a broader sense than a single short term goal. Problem solving is at times involved in the studio as laboratory but it is not the goal. The modern inventor works for a company interested in its output, and protecting its market share.

The concern for truth in making which occupied the minds of the Minimalists and the development of the specific object is one that has not been resolved. Rather than answering the question asked by art, Minimalism sought to ask the question that currently occupies us. If one continues to consider image making as the only entry point to art, as the method for measuring the things which one makes, one will fail to answer this question. If this question is acknowledged for what it was: does a practitioner need to think about the image? Then the practitioner will be free a capable of making things, which are not images of other things, of which we are aware of their function in the broad sense, and that relate to the built and natural worlds in which they exist.

The thingmaker, who makes functional things, can set the requirements of his or her work, but can be judged in many ways. One such method of judgment will be the nature of the function, and the nature of existence of the things that he or she makes. If this functional nature is revelatory, or inventive, or innovative, then this will require a certain judgment, if it is banal, it will require another. While the criteria which each viewer, or user, will bring to a work will change depending on the viewer. These criteria, which viewers bring to things, will be the place of debate.

Rancière’s representative regime set up the notion of art as the relationship between poeisis and aesthesis, rather creation and perception, as held in check by the need for the creator to represent the world as he sees and the viewer to interpret along the same
lines. This balancing factor was called Mimesis.\textsuperscript{52} The Aesthetic regime attempted to break from this by emphasizing the autonomy of the work of art, or the sublimity of the subject matter and the lack of ability to truly deal with this subject matter. It also set the scene for its own destruction by emphasizing the equality of all things and subjects. Rancière’s system of criteria as embodied by the aesthetic regime of art is inherently flawed, as he well admits, but beyond this, his viewpoint of what counts as art is flawed as it rests on the notion of art being image, and criticism being a large part of the goal of art. This is the limited viewpoint of the aesthetic regime:

It replaces them with the proclamations of art’s new modesty – it is modest not only as regards its capacity to transform the world, but also as regards claims about the singularity of objects. This art is not the founding of a common world through the absolute singularity of form; it is a way of redispensing the objects and images that comprise the common world as it is already given, or of creating situations apt to modify our gazes and our attitudes with respect to this collective environment. Such micro situations, which vary only slightly from those of ordinary life and are presented in an ironic and playful vein rather than a critical and denunciatory one, aim to create or re-create bonds between individuals, to give rise to new modes of confrontation and participation.\textsuperscript{53}

The specific object began to point the way to a kind of truth inherent within an art object, one which we cannot attain until we acknowledge the functional relationship of made things to each other, and to the built and natural worlds. This remains impossible while we retain the notion of art a separate entity from the works that are produced and we focus only on the image as the area of a work of art, rather than paying attention to the telos of the individual made thing and its relationship to the whole.

Here we acknowledge that it is preferable and possible for artistic practice to re enter business of creation, and to strike the balance with aisthesis along the lines of the functional. We have no need to hold ‘Art’ aloft as we have done, indeed we are incapable of it, and we have seen why it is preferable to not do so. Heidegger’s Jug should be the benchmark of what is considered when one embarks on the process of making a thing. Practitioners can be Thingmakers and innovators rather than toeing the line of the aesthetic regime and producing bland cultural criticism, incapable of inspiring the wonder.

\textsuperscript{53} Ibid. p.21.
Bibliography


Appendix

An Interview with James Capper
James Capper and Helen Pheby PhD.
Yorkshire Sculpture Park
2013
Unpublished: Included courtesy of the artist.

James, thank you for sharing your fascinating artworks with Yorkshire Sculpture Park, where it is very interesting to consider your practice in relation to traditional sculpture concerns, such as space, form and material.

I'm curious as to how you began making your sculptures, is it something that stems from childhood?

I worked for a man called Charlie Goldup the village mechanic as a Saturday boy from the age of twelve to sixteen. I also worked from the age of thirteen with the local farmer John Arthur. He had a large arable farm in Kent were I learnt a lot about heavy equipment operation. To galvanize this early knowledge I worked from the age of sixteen to eighteen with steel fabricators in Kent, to learn the methods used in welding.

And how was this developed as a student?

It was while studying for my BA at Chelsea Collage of Art that I realized there was potential in the idea of steel sculpture that could be mechanized to move in an installation environment. It wasn’t until I made Ripper in 2009 that I realized that I was dealing with divisions in my sculpture such as earth-marking and carving.

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 when I was on my BA. I was influenced by Tinguely, Smith and Richard Wilson, who I worked for a week with on his Barbican Curve Space show. The history of mechanized 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 own 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 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 existing and commercial equipment, such as JCB's, or entirely from your imagination… [aesthetics of machine / Le Tourneau / futurism]
Its an interesting observation 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 these machines' obscurity. The images made me interested in the work of Robert Gilmore LeTourneau – 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 like ideas man, putting thoughts to 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 etc. are the foundation works for subsequent projects?*

Yes I have a growing interest in walking machines. It's partly due to my becoming bored with wheels and caterpillar tracks. A Scandinavian company called TimberJack made a very interesting walking tree harvester. There is very little information about it. I have 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 be able to take 4Legs or Mountaineer up into the Himalayas and have Hector film it.

*And please can you explain a little how you categorize the sculptures?*

Categorizing the sculptures helps me keep focus on specific 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. Cross-pollination means the teeth designs can be seen smaller, lighter and extruded on a carving machine like Nipper that is in a totally different category. These are the divisions:

- Earth Marking Division
- Carving Division
- Offshore Division
- Material Handling Division

*For me, the earth marking division relates to Land Art, not only the interventions into earth, but its processes. I'm thinking particularly I suppose of images of Robert Smithson using a JCB to make very famous work Spiral Jetty (1970). Is this a conscious reference?*

Yes, 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 Heizer, who uses dynamite and yellow steel to create his art.
And in the making of your sculptures there are direct correlations with the appropriation of industrial materials and methods as pioneered by Julio González (1876–1942) and developed by Sir Anthony Caro, 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 that 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 my own hand-held power tools. These tools can be used to make carve marks into blank 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 clearly plays an significant role in both your sculptures and works on paper, how does this relate to, say, the painted sculptures of Caro and Phillip King as well as the commercial associations, such as JCB yellow.

Hi-Way Yellow was used on construction machinery in America by Caterpillar in the 1930s so that you 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 outside sculptures and 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.

And how did the walking sculptures evolve into the offshore ideas?

I have always loved speedboats, fishing vessels, tug boats and oilrigs. 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 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 planed to date is the Walking Ship, a 300ton walking light cargo ship (a Coaster) that utilizes 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 for this ship would be that it has a studio in the cargo hold for building experimental offshore sculptures that 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?

This project is vital for the testing and research of Midi Marker along with experimentation 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, and the space I need to film demonstrations. Also 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? The film includes footage of one of your most recent works Mountaineer, (?) which is a very ambitious and exciting project, what other ideas are in development?

I constantly have a number of drawings getting made along with maquettes and machines. Mountaineer would be an incredible project to get on with, but I’m still working on finding people to fund the project. Mountaineer would tower over Tread Toe; the machine weighs 8 tons and has a fully glazed operators 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 like the multiple and some drawings for a machine that can climb up the side of oil tankers, using 4 telescopic legs with electromagnetic pads. There are also some small blocks of blue foam in the corner of the 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 idea, grow from simpler techniques that we can experiment with ourselves, for example the multiple you’ve made for YSP, or the free downloadable information. What’s your advice to anyone hoping to make their own mechanical sculpture?

Mechanical parts inside a machine work together in a sophisticated way, but when the machine is stripped down to its individual mechanical parts it becomes easier to understand how the whole thing works. The process also gives you ideas about how you would go about making it better. The functioning maquettes, like Mini Marker, are a great example 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 the way through my life, from sitting on the gate to driving the forklift in the fabrication shop, all the way through to operating a five ton excavator with my Ripper Teeth at Modern Art Oxford last year. Hands-on experience teaches you fast, effectively, 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 to using hydraulics the machines would use electric motors that would power winches like Ripper. These machines were much more unreliable, they would break down all the time, whereas the hydraulic machines well in all whether 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 the case of the machine builder 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.