Clever Fetishists

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Anthropologist Arjun Appadurai has coined the phrase 'methodological fetishism' to denote tactics of thinking with objects.[1] Fetishisms tend to attract a following, and methodological fetishism is no exception. Mexican textiles, unbreakable glasses, folding screens, Victorian tapestries, telescopic micrometers and stilettos strung together to form a wheel – the contributions to this volume are testimony to art history's amour with objects. But object-centredness isn't confined to art history. Ever since Galileo astonished his contemporaries by dropping balls off the leaning tower of Pisa to establish his law of free fall and Newton contemplated an imaginary system consisting of two gravitationally interacting, spinning spheres in otherwise empty space in order to calculate the motion of planets, scientists have become honorary members in the club of methodological fetishists. This response explores the lands of object-based thinking in the sciences, whose provinces are more closely intertwined with those of art theory than is obvious at first sight – a point underscored in Hunter's discussion of Hooke's paper micrometer as an 'artistic object of paradigmatic science'. This air of familiarity will, I hope, make my excursion into foreign territory comfortable even for those without natural predilections for border-crossing.

The examples from Galileo and Newton indicate the two main points at which object-based reasoning enters scientific discourse: experimentation and modelling. Studying nature in its full splendour and unabridged richness is beyond the capabilities of mortals. Scientists' response to this limitation is to focus on well-circumscribed and manageable systems. Science is the art of the possible. A capable experimenter singles out a particular part of nature as her object of study, her experimental system, and makes sure she is able to control as many of the relevant variables as possible. Galileo chose to throw balls from a tower rather than waiting for birds to drop out of the sky.

Following Galileo's lead, experimental scientists have gained great insight into the workings of specific and, for the most part, relatively simple systems. Since it turned out to be too difficult to investigate cell differentiation and the development of organs in mammals, biologists started using *caenorhabditis elegans* (a small, transparent worm) as their object of study. In it, one can directly observe cell division under a microscope.[2] But few experimental systems are studied for their own sake. In fact, our intrinsic interest in transparent worms and falling balls is limited at best. These systems are interesting because they teach us more general lessons. The study of *caenorhabditis elegans* gives insight into the inner workings of

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cell division that generalize to large mammals. We sequence their DNA because this teaches us lessons about DNA in general, including our own. In the jargon of experimental methodology: the findings are externally valid. We are interested in experimental systems because they produce externally valid results. To translate into the local patois of the current project: we do so because they are clever objects.

Cleverness features even more prominently in scientific models. While it is at least conceivable that we could take an independent interest in the properties of an experimental system, this would seem outlandish in the case of a scientific model. Newton invited us to contemplate a fictional set-up consisting of a small, spinning sphere with homogeneous mass distribution orbiting around a large sphere of the same kind gravitationally attracting each other not because he had any particular interest in fictional spheres. Instead, he invited us to contemplate this fictional object because – and this was one of his great insights – his equation produced an exact solution for this system. Better, his solution is such that it approximately describes not only the motion of fictional spheres, but also of real planets if we interpret the model so that the small sphere stands for a planet and the large sphere for the sun. The model is a vehicle for learning about the world. Models are indeed the units on which significant parts of scientific investigation are carried out rather than on reality itself. We study a model and thereby discover features of the thing it stands for. We study the nature of the hydrogen atom, the dynamics of populations, or the behaviour of polymers by studying their respective models. We can do these things, we might say, because the models are clever objects.

Metaphors are seductive, but on this occasion restraint is imperative. Talk of clever objects could be misconstrued as the claim that things in the world fall into two categories: clever and dumb. Clever things are not a distinctive ontological category. Cleverness is not an intrinsic property of an object; anything can be clever. Wayfarers though we are in this strange land, such residual vestiges of animism have to be expurgated.

Thankfully, that exorcism can be assisted by a thought experiment crafted by art theorist and philosopher Arthur Danto who was aiming to show that being a work of art is a status conferred upon an object independently of what the object itself is.[3] Revisiting his argument is instructive because the mechanisms for nominating an object for 'being clever' are the same as for 'being a work of art'.Danto invites us to visit a little exhibition consisting of the following pieces. A square of red paint, which is intended by the artist to show the Israelites crossing the Red Sea. Next to it is 'Kierkegaard's Mood', a painting exactly like the first by a Danish portraitist. Then there are two other red squares, exactly like the Israelites crossing the Red Sea. Both are entitled 'Red Square'; one is a clever bit of Moscow landscape, the other a minimalist example of geometrical art. Next in line is another red square – again indistinguishable from the others – called 'Nirvana'; this is a metaphysical painting based on the artist's knowledge that the Nirvanic and Samsara orders are identical and that the Samsara word is fondly called the Red Dust by its deprecators. To its left, we see a still life by an embittered disciple of Matisse, entitled 'Red Table Cloth', which looks, again, exactly like the other pictures of the exhibition. The last two pieces in this little collection are a canvas primed with red lead, upon which Giorgione would have painted his unrealized masterpiece 'Conversazione Sacra' (as Danto calls it) had he lived to execute it and a plain red square, just a thing with paint upon it, which is a mere artefact and not a work of art at all.

This exhibition is rather monotonous since all pieces look exactly the same. Nevertheless, they are very different works of art, belonging to genres as

different as historical painting, psychological portraiture, landscape painting, geometrical abstraction, religious art, and still life. The exhibition also contains two canvases that are not works of art at all. Even without being able to revisit Danto's sophisticated discussion of art here, his main point emerges effortlessly: a work of art *as a work of art* has a great many properties of an altogether different sort from those belonging to physical objects materially indistinguishable from them. For this reason, the difference between an object that is a piece of art and one that is not has to be grounded in something other than in what they are *as objects*. Danto identifies interpretation as the crucial feature: 'An object *o* is then an artwork only under an interpretation *I*, where *I* is a sort of function that transfigures *o into a work*: $I(o)=W$. Then even if *o* is a perceptual constant, variations in *I* constitute different works.'[4]

Thought experiments are good; real cases are better. Fortunately such cases are easy to find. Kazimir Malevich's black square could have been a template for Danto's thought experiment. Marcel Duchamp's urinal and ready-mades in general serve as examples of objects that are pushed across the boundary from 'mere objecthood' to being a work of art without changing the object itself (barring the act of declaring them to be works of art which may involve adding a bogus artist's signature or hanging them on a museum wall with a label next to them), and they would soon be back into that realm without an artist's transfiguring effort.

Following Danto's lead, we can say that a 'mere object' becomes a clever object if an interpretation is imposed on it – that is, an object *o* is a clever object only under an interpretation *I*: $I(o)=C$. Even if *o* itself is left untouched, variations in *I* make *o* clever in different ways. Mice, worms and fictional spheres may be just that: mice, worms and spheres. They become informants about nature's properties and scientific models only under a certain interpretation.

This is true not only of things like worms that we find in nature 'ready for use' (something like the scientific pendants of ready-mades), but also of skilfully constructed artefacts. The so-called Phillips machine is a case in point. The machine is a large system of pipes, valves and reservoirs through which water is channelled. The system, built by Bill Phillips, was devised as a representation of a Keynesian economy. With the flow of water representing the flow of money, the machine can be used to instruct us about the workings of an economy by tracing the movement of water through the system.[5] However, no matter how skilfully crafted this machine is, it serves as a tutor of economics only under a specific interpretation. Had Phillips been a manufacturer of pipes, he could have built exactly the same hydraulic system for the purpose of promoting his company at an industrial fair. It would not then have been a representation of an economy; in fact, it would not have been a representation of anything at all. It would merely have been a sample of pipes illustrating their quality and level of technical sophistication. Furthermore, it is by no means necessary to use this hydraulic system as a model of an economy. It is possible that, at some point, someone will find it convenient to use the same set-up of pipes to represent the dynamics of a population or the water supply system of a city. Under a different interpretation the object becomes clever in a different way. Conversely, when stripped of their interpretation, clever objects become dumb again. The equation $E=mc^2$ is nothing but a picturesque string of symbols when written into a cloud of smoke on an Amsterdam postcard. Data charts, microscope images, computer graphs, and laboratory equipment are similarly degraded to bare objecthood when moved into interpretation-free spaces.

Hence, cleverness resides not in the object of the fetish, but in those who fetishize the object. There are no clever objects; there are only clever fetishists. Appadurai anticipates such a move when he cautions that 'our own approach is conditioned by the view that things have no meanings apart from those that human … motivations endow them with' and that 'from a *theoretical* point of view human actors encode things with significance'. Yet he insists that 'from a *methodological* point of view it is the things-in-motion that illuminate their … context.'[6] True enough. Even if everything *could* be fetishized by a mere act of *fiat*, not everything *is*. Fetishism is a selective pleasure. The methodological question then is: in a given context, why are some things fetishized and not others? At least in the context of science, the answer to this question is that, some objects, due to their make and intrinsic constitution, lend themselves to pursuit of the aims of those who choose an object, while others don't. I can declare the mug on my desk to be a representation of the solar system, but unlike Newton's imaginary spheres, the mug does not lend itself to an interpretation that tells us something interesting about the universe. So the choice of objects reveals a great deal about the chooser's intention, and it is in that sense that the study of objects is revealing. But it is revealing not because objects themselves exercise cleverness; it is because against a given background not every object has features that make interpretation worthwhile. This is true of worms, balls as well as of Fischli & Weiss's stilettos and burning paintbrushes.

Science and other endeavours part ways when the standards of interpretation are set. There is nothing in objects that makes them intrinsically scientific. Water pipes, soap bubbles, and spinning tops have become objects of science not because they come with a label on their sleeves; it is because they could be interpreted in the right way. What counts as the right way is different from discipline to discipline. Rephrasing a Kuhnian point in the current idiom, one could say that learning how to practise a particular science means learning how it interprets its objects. Objects that don't lend themselves to interpretation of the kind learned fall outside the scope of the discipline. Mechanics, for instance, studies a restricted range of geometrical objects like ideal planes, perfect spheres, and pendula with massless strings, because these lend themselves to the kind of idealizing interpretation that is characteristic of mechanical modelling.[7] Understanding the kind of interpretations allowed in a certain field is an important step towards understanding the *modus operandi* of an entire discipline, in science and beyond.

The exorcism of the last remainders of animism may make the world a colder, less hospitable place. Objects don't just play dumb; they are dumb. They are betrayed by the cold precision of a simple equation: $I(o)=C$. What we love about an object is its cleverness, but the cleverness is entirely our contribution. The o is part of the world; the I is our addition to it. Ultimately, fetishism is narcissism. We might as well be hanged for a sheep as a lamb. So once we give in to fetishism, we may as well admit to narcissism. And doesn't this make fetishism all the sweeter? I would think so.

But have we not expurgated a demon that has never been there in the first place? Talk of clever objects is surely metaphorical and no one in their right mind ever thought that cleverness resided in objects themselves. Of course. But theorizing non-clever objects is as informative as contemplating a biology of non-elephants: a purely negative circumscription of clever objects contributes very little to their understanding. Luckily the critique I have proposed is more than just exorcism. Not all metaphors work in the same way, and 'clever object' defies

understanding along lines of standard theories of metaphor. Comprehending what makes an object clever does not require us to compare two things; it does not involve the interaction between a literal and metaphorical element nor even is there a clearly identifiable speech act to be analysed. Our analysis fills the gap left by the failure of traditional accounts: the proper analysis of clever object talk is given by the equation $I(o)=C$.

This is not only a contribution to semantics. The analysis of cleverness along Danto's lines points the way to a constructive study of cleverness: it invites us to analyse in detail what is meant by interpretation. The *I* in our equation is nothing but a placeholder, a blank to be filled. And the blank has to be filled differently in different contexts. Artistic interpretations differ from scientific ones. What constitutes an artistic interpretation? And what a scientific one? How exactly are they different? And how exactly do different artistic interpretations differ? $I(o)=W$ was Danto's springboard for an investigation of how an interpretation turns an object into a work of art; $I(o)=C$ is our springboard to study the nature of interpretations that make objects clever. The contributions to this volume mark the beginning of that journey.

Notes
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1 Arjun Appadurai, 'Introduction: Commodities and the politics of value', in Arjun Appadurai, ed., *The Social Life of Things: Commodities in Cultural Perspective*, Cambridge, 1988, 5.
2 Biologists refer to creatures like *caenorhabditis elegans* as model organisms. For a discussion of model organisms, see Rachel A. Ankeny and Sabina Leonelli, 'What's so special about model organisms?', *Studies in History and Philosophy of Science*, 42, 2011, 313–23.
3 Arthur Danto, *Transfiguration of the Commonplace: A Philosophy of Art*, Cambridge, MA and London, 1981, 1–3.
4 Danto, *Transfiguration of the Commonplace*, 125 (original emphasis).
5 For a historical discussion of this machine, see Mary S. Morgan and Marcel Boumans, 'The secrets hidden by two-dimensionality: The economy as a hydraulic system', in Chadarevian de Soraya and Nick Hopwood, eds, *Model: The Third Dimension of Science*, Stanford, CA, 2004, 369–401.
6 Appadurai, 'Introduction', 5 (original emphasis).
7 For a discussion of representation in mechanics, see Roman Frigg, 'Fiction and scientific representation', in Roman Frigg and Matthew Hunter, eds, *Beyond Mimesis and Convention: Representation in Art and Science*, Berlin and New York, 2010, 97–138.