

Alex Pentek  
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## Observationism: Seeing beyond the surface of things.

The term ‘Observationism’ was coined in a series of email exchanges with philosopher Professor Marcelo Stamm, College of Architecture and Urban Studies, Virginia Tech, Washington DC in 2021, and featured in my MFA research paper ‘The Fold as a Site of Transformation’, National College of Art and Design (NCAD) Dublin 2022. In the following I aim to explain my journey towards observationism and why I believe it is important. I also hope that it will be of interest to other areas outside contemporary art including the sciences, design, architecture, robotics and philosophy.

Observationism does not reduce surfaces or objects to hiding an underlying truth or essence. Nor is it the same thing as two of its close neighbours, ‘*observationalism*’ (where things must be observed directly to be considered real)<sup>1</sup>, and ‘*perspectivism*’, (where reality is the sum of many different perspectives). Rather than being a metaphysical theory or objective description of reality, observationism is simply a way of looking at things inspired by the artistic exploration of materials. We may even already be observationists without knowing it.

While observationism is more of a way of looking than a fully developed philosophy, it can still be helpful to navigate various conflicting philosophical ideas. In contemporary art practice and many other fields including design and robotics, we must also be philosophers to meaningfully contextualise and reflect on our work. But 20th Century philosophy is vast and varied with many different and conflicting positions to choose from. The question is where to begin with this complex and seemingly impenetrable subject?

An answer to this question came from observing and experimenting with various materials in the studio, in particular with origami-inspired complex folded surfaces. Material-led research has helped me to discover an interest in *ontology*, (how things come into being), and to find different ways of approaching this and other philosophical questions.

### 1. Thinking through materials.

By intuitively experimenting with various materials in the studio, artists allow novel outcomes to take place. In design terms, this goes beyond traditional problem solving which can be likened to ‘*hill climbing*’, where a proven methodology is followed step by step to achieve a task. Instead, allowing happy accidents to take place with unforeseen results, artistic material-led research is more like ‘*hill finding*’.<sup>2</sup> Having flexibility to learn as new observations and insights come to light is at the heart of observationism.

As observationists, artists may contribute in parallel to contemporary ideas in science and philosophy using non-traditional, artistic research methods and material-led insights. But

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<sup>1</sup> Sindjelic, S. “The Old and New Philosophy of Science”, Publications de l’Observatoire Astronomique de Beograd, vol. 85, pp. 35–43, 2008.

<sup>2</sup> Do, Ellen & Gross, Mark. Environments for creativity: A lab for making things. 27-36. (2007)

artistic research is a process that is not traditionally academic, linear or logical, and is *qualitative* rather than *quantitative*; making it difficult to validate or share new ideas without using academic methods or language. Some would argue that instead the onus is on academia to learn more about artistic research methods. Artist and academic Lucy Cotter explores this tension with great clarity in ‘Reclaiming Artistic Research’,<sup>3</sup> published in 2019.

Looking at perception through a mixture of artistic and cognitive perspectives, neuroscientist Anil Seth presents a “way in which art and brain science can be equal partners in revealing deep truths about human experience,”<sup>4</sup> saying artists and cognitive science both explore different aspects of perception in parallel to one another. The idea of artists contributing to other fields of knowledge (such as botany and anatomy for example), is not new. Thinking and experimenting with materials is a method that is relevant to many different areas, whether studying and/or practicing in the arts, or working in other fields of research. As mentioned earlier, many of us are likely to already be observationists with a flexible, dynamic way of looking to find multiple perspectives and meanings depending on the task at hand.

Thinking visually with imagery instead of language is typically how we all think *eidetically* as children before our use of language is fully developed. Before we can speak or count we have a visual ‘sense’ of number, and can quickly tell which pile of cookies is larger. This visual way of thinking involves the intuitive, creative and imaginative right hand side of our brain as opposed the analytic, logical, linguistic, mathematical and rational left hand side we develop later on.<sup>5</sup> Logical thinking usually becomes dominant through a mixture of education and cultural tradition. Against this tradition and through diligent practice, many artists maintain the ability to think eidetically. Perhaps referring to this sort of intuitive naivety is what Picasso meant when he said “To be young, really young, takes a very long time.”

To be an observationist is to allow ‘objects’, surfaces and materials to communicate and reflect deeper insights, meanings and connections in seemingly unrelated or un-obvious ways through the unique and subjective lens of the viewer. A famous example of observation beyond the surface of things is Newton’s theory of universal gravitation, observed by questioning beyond the accepted every day phenomena of a falling apple. Another example could be an ocean swimmer seeing that calmer strokes can achieve greater distance over time, and observing that in life a calm attitude can achieve more in the long run. These two examples show how explicate, sensual experiences of the qualities of objects and materials (in this case apples and water), can be observed to implicate scientific and philosophical insights.

## 2. Crisis in Observation:

Questioning how things come into being, the underlying order of things and and their often blurred relationships fascinates me. This interest owes much to a crisis I experienced with observational drawing as an art student. But we are likely to have experienced an observational crisis of our own much earlier in our lives...

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<sup>3</sup> Cotter Lucy and Lawrence Abu Hamdan. *Reclaiming Artistic Research*. 2019.

<sup>4</sup> A. Seth. From Unconscious Inference to the Beholder’s Share: Predictive Perception and Human Experience. Sackler Centre for Consciousness Science, Department of Informatics, University of Sussex, Brighton. P.1. 2019

<sup>5</sup> Edwards, Betty, 1926-, *Drawing On the Right Side of the Brain: A Course in Enhancing Creativity and Artistic Confidence*. Los Angeles : New York, J.P. Tarcher, 1989.

In her seminal book 'Drawing on the Right Hand Side of the Brain', Betty Edwards describes our history as artists often begins with observation from a very young age. First, we enjoy the haptic pleasure in mark-making. Then, becoming lost in the process we notice how our movements are recorded by the drawn or painted line as we make those marks. Soon after, we make the giant leap by observing that these marks, - a circle here, two dots and smiley face there; can *symbolise* things in the real world outside us.

For the next number of years we build a repertoire of increasingly complex and detailed symbols, cataloguing what we increasingly and linguistically know about ourselves and objects in the world. Then, usually before age 10 we have our first artistic observational crisis: When we draw what we know about the world it doesn't look realistic, like how we actually see or experience things. In other words, our drawings look rubbish! We know a chair has four legs and so we always draw four legs, but from a real perspective sometimes a chair only has three, two, one or no legs. Most of us give up drawing at this point at the daunting prospect of re-learning how to draw everything in this new observational and realistic style that we demand of ourselves. According to Edwards, this explains why most adults who say 'they can't draw,' show the drawing skill level of an average 8 year old. <sup>6</sup>

Like many artists and with an intuitive grasp of perspective from an early age, I refined my drawing skills up to and during my early years in art college, where I learned basic anatomy and life- drawing, as well as how to sculpt in clay, cast bronze, carve plaster and weld sheet metals. Focusing on sculpture, drawing and sketching continue to be an essential thought tool in trying out new ideas. But observational drawing lost its allure as I experienced my second observational crisis: Seeing self-expression as being inevitable in all that we do, rather than looking inwards towards expressing inner emotions, I was interested instead in looking outwards at the world to find inner meaning and the underlying connections between things. *This meant looking beyond surface appearances.* As a sculpture student I was also curious about the physicality of form, (seeing sculpture as the ultimate form of drawing in three dimensions). This led me to explore and observe materials themselves, and how they behave under certain conditions.

### 3. Discovering the Fold.

In search of 'knowledge of materials', I began to study origami. Transcending the humble material of paper into origami's endless range of complex folded geometric forms, this was originally not an aesthetic choice, but a technical one: I thought if I could first learn these techniques I might then be able transpose or synthesise them into other materials and become a master. At least, that was the plan.

This was during the 90's, when the information age began to take off and origami experienced an explosion in complexity, as its rigid geometries adapted well to exploration in the fields of mathematics, 3D modelling and graphics. Discovering 'rigid origami' tessellated surfaces, where each fold or facet is interconnected, I realised that origami could be more than a means to an end but an end in itself. In parallel to this, traditional origami folds including the 'water-bomb' fold, became the basis for vast areas of scientific material innovation, ranging from micro-medical devices and stents to astro-solar sails with the Koshiro 'Miura' fold to Robert Lang's twist folds now being used to study spiral galaxy

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<sup>6</sup> Edwards, Betty, 1926-, Drawing On the Right Side of the Brain: A Course in Enhancing Creativity and Artistic Confidence. Los Angeles : New York, J.P. Tarcher, 1989.

formation in cosmology. Origami is now quite literally everywhere. From dissolvable robots that swim in our blood to form-active building design and deployable shelters on this and other worlds.

Yet, while seeing the fold as a contemporary metaphor for these achievements, and proving to be technically useful in exhibiting temporary folded installations on both hemispheres of the world, deeper questions still remained un-answered.

### 3. Crisis in Philosophy: Actor Network Theory.

While studying for my MFA at NCAD we read a mixture of contemporary and 20th Century philosophy and theory focused on exploring different aspects of postmodernity. Among these texts was 'Aircraft Stories: Decentering the Object in Technoscience' by John Law. A fascinating mixture of philosophy, science and cultural theory, Law develops the idea of Actor Network Theory, (ANT), describing a decentralised network of connections based on the natural structure of the *rhizome*. With no centre (and perhaps another example of observationism), the various 'nodes' within this network form connections for the possibility for things to continually change. These 'actors' or agents for change can include among other things historical events, infrastructure, the military-industrial complex, inanimate objects and people, and are measured not by their unique qualities but only by *their effect in the world*. For example, if Luis Pasteur had not discovered the pasteurisation process in the 1860's, ANT hypothesises that within the existing rhizomatic network of technology, apparatus and infrastructure of the times, someone else would have made the same discovery in his place.<sup>7</sup>

Measuring things and people by their agency and effect in the world overlooks our individual unique qualities, which does not sit well with me (beyond reasons of vanity). While there is much to be gained with ANT, and it importantly introduces the agency of inanimate objects, I began my search for ways to criticise this oversight or at least to balance the argument.

### 4. Object Oriented Ontology.

I found Graham Harman's book Object Oriented Ontology (OOO), to initially be a refreshing antithesis to this problem. The 'object oriented' part of the title comes from object-oriented computer programming, where existing programs are considered to be objects that can be built upon without having to start writing code from scratch. Harman's ontology and description of reality describes a system of existing objects with 'real qualities' and 'sensual qualities' which overlap in our perception of the world.<sup>8</sup>

A number of ideas are explored here; Firstly, unlike early Christian religious belief systems that have an uneven tiered ontology with a Creator causing things to exist in a way that is inaccessible to humanity, Harman aims to create a flat ontology where all 'objects,' real or sensual are *autonomous and equal*. By focusing on objects, he responds to the following two opposing views of reality;

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<sup>7</sup> J. Law. Aircraft Stories: Decentering the Object in Technoscience. Duke University Press. 2002

<sup>8</sup> G. Harman. Object Oriented Ontology. Penguin Random House, UK. P. 41-54. 2018.

- The atomistic view (originally proposed by greek philosopher Democritus), that all things are really just made of smaller things like atoms or particles, implying the scientific myth that “it’s all just physics really”<sup>9</sup>. Harman calls this ‘undermining’ reality.
- That all things are really only measured by their effect in the world, (like in ANT), which he calls ‘overmining’ reality.

Harman seeks middle ground between undermining and overmining by our experience of ‘objects’ themselves. This broadly includes histories, people, animals and fictional characters etc. Preserving the idea of un-knowable inner qualities of things that Immanuel Kant called *noumena*, Harman also says inner qualities exist within themselves and are ultimately unknowable to our limited senses. While he credits ANT for introducing the agency of inanimate objects as “a debt that cannot be repaid”,<sup>10</sup> Harman also contributes poetically by introducing metaphors to describe things without needing to access them directly and destroying them through over-analysis. But with objects being ultimately un-knowable, autonomous, and isolated, this fragmentary approach ultimately runs into unresolved problems. His system of object-hood created by real and sensual qualities is a process he terms ‘*vicarious causation*’, which he says happens indirectly when perception of sensual and real qualities interact between objects. This cannot be proven and we just have to take his word for it, which seems to be very close to the tiered ontology he was originally trying to avoid. Harman describes objects as being isolated and autonomous and rejects any hidden connection between things (such as emergence), as being reductive. This seems to be a theory about fixed facts and ‘reality as it is’.

Despite these concerns, I found Harman’s ability to challenge popular contemporary ideas extremely refreshing and useful, and his style of writing is very easy and enjoyable to read.

## 5. Rediscovering the fold.

Levi Bryant deals specifically with the above problems in his paper ‘The Interior of Things: The Origami of Being’, published in 2016. Criticising Harman for failing to deliver the flat ontology that he promises, Bryant goes on to propose an alternative which he describes as “an ontology of folds and folding in which the minimal unit of existence is conceived as the fold between thing and field such that things interiorize the field out of which they emerge.”<sup>11</sup>

To communicate this idea (against the autonomy of objects), Bryant uses the image of “an infinitely expansive piece of butcher’s paper that radiates outwards in all directions in time and space.” Saying this surface is not empty but filled with waves and wrinkles, he continues “The surface, in a word, is filled with turbulence, gradients, differences, and creases. As such, it is a mobile plane or a plane filled with all sorts of flows. In this regard, an infinite ocean with all of its depths, waves, and turbulence might be a better image of the plane of existence than a sheet of paper. We can say of the plane of existence what Michel Serres says of [Greek philosopher] Lucretius’ ontology: *The world to which it testifies (...) is a place of turbulent flows, of chaos and the emergence of order by what classical metaphysics has taught us to call chance.*”<sup>12</sup>

<sup>9</sup> Cartwright, N. *A Philosopher Looks at Science*. Cambridge: Cambridge University Press. 2022

<sup>10</sup> G. Harman. *Object Oriented Ontology*. Penguin Random House, UK. P. 41-54. 2018.

<sup>11</sup> Bryant, Levi R. ”The interior of things: The origami of being”. *Przegląd Kulturoznawczy* P. 3. 2016

<sup>12</sup> M. Serres, *The Birth of Physics*, transl. J. Hawkes, Clinamen Press, Manchester 2000, p. x.

With Michel Serres' image of a vortex as a primal form that translates information into its seemingly solid structure only to eventually dissipate back into the field it came from, Bryant describes moving folds and waves to show a unity of differences, and avoids falling into the trap of dichotomies through the two-fold structure of the *dyad*, (where 'one' thing is made of 'two' parts). Here, there are no fixed crystalline structures but instead the fuzziness of Giles Deleuze's 'anexact' ideas. Bryant ends with his most important idea, the process of *implication* and *explication* through creative mutation and change. Summarised as being what he calls '*platology*', this can be defined as an origamic process of emergence and ecology.<sup>13</sup>

## 6. Implicate and Explicate Order.

Interestingly, the word 'implicate' has its roots in the latin word '*plicare*', which means to fold. Bryant's ontology of implication and explication resonates with my material-led research into the fold, with observationism, and also the writing of physicist David Bohm. In the studio I have observed that contained within complex folded surfaces there is the possibility of other forms that may not be obvious but which are implicated through shared crease patterns. In these complex interconnected folded surfaces I have also observed unpredictable, emergent and holistic processes, where changing just one single fold can often affect the entire structure.

In 'Wholeness and the Implicate Order,' first published in 1980, David Bohm explores the holistic nature of reality which he calls *Undivided Wholeness in Flowing Movement*. There are a number of overlaps between Bryant's and Bohm's ideas, for example Bohm writes about the emergent qualities of quantum 'particles' being more like tiny fuzzy clouds of potential than defined objects, and describes graphs of events that change over time called 'world tubes' which are similar to vortices in a flowing stream. In this 306 page book Bohm discusses in great detail an ontology that sees beyond the surface of things, saying "Our theories are not descriptions of reality as it is, but rather, ever changing forms of insight that point to or indicate a reality that is implicit and not describable or specifiable in its totality."<sup>14</sup>

This also describes the ethos of observationism, which values looking both on and beyond the surface of things. Bohm discusses the blurred boundary between an observer (including equipment and apparatus), and the thing being observed, - leaving no stone unturned in questioning contemporary methods of gathering 'facts' and 'knowledge', (*epistemology*). This includes experimenting with how we use language, and also examines alternative Eastern philosophies, mathematical axioms and proofs, relativity, and new quantum theories. Grounded on observations in the laboratory that point to an underlying implicate order, one of Bohm's most striking illustrations is as follows:

A glass jar with a centrally fixed handle stirrer is filled with transparent and highly viscous glycerine. Drops of coloured ink are placed into the glycerine, where they are suspended as coloured drops. Their geometry illustrates the explicate order that we can see in the universe around us. Stirring the fluid and ink drops by turning the handle, they become strands of colour and quickly fuse into a seemingly chaotic band of mixed colour. This seems to be a classic case of entropy (the measure of disorder), -predictably increasing over time. Remarkably, when the handle is turned backward the exact same number of turns the colours re-form into strands and eventually return to the original perfect coloured drops. This shows that while in an apparently chaotic mixed state, all the information of the drops is not lost but

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<sup>13</sup> Bryant, Levi R. "The interior of things: The origami of being". *Przegląd Kulturoznawczy* P. 3. 2016

<sup>14</sup> Bohm, David. *Wholeness and the Implicate Order*. Routledge & Kegan Paul. London. P. 21-22. 1980.

contained within the mixed strands as an example of the implicate order. Bohm uses this model to discuss quantum events such as hidden variables and entanglement, suggesting there is a hidden implicate order beyond our reach but which, if we know where to look, we can observe as it manifests in the explicate order.<sup>15</sup>

## 7. Concluding Observations.

A number of years after reading about this experiment, I was making a paper sphere for an exhibition using reverse-folds. Before forming the sphere, the folded sheet resembled a concertina-folded tunnel. Picking this up from the middle accidentally caused the folded sheet to form a saddle shape which quickly became an inverted sphere turned inside out, gathered at the 'equator' instead of at the poles. Although now appearing very different, (like two funnels connected at their narrow ends), all the information of the sphere was still contained and implicated within these folds. This led to a new series of works based on this material research to express Bohm's idea of an implicate and explicate order. While this gives an example of observationism's ability to look both on and beyond surface appearances, there are endless ways in which things may be implicated other than by folding. These can include but are by no means limited to the cultural meaning of objects (semiotics), symbolism and metaphor.

For example, in Documenta, 2007, Kassel, Germany, Chinese artist and political activist Ai Wei Wei created a work titled *A Fairy Tale of Displacement*. This deals with themes of mass migration, globalisation and the hegemony of the Chinese authoritarian state against the poetic and imaginary backdrop of the 1001 nights of the Scheherazade story. By importing 1001 Qing Dynasty chairs from China, the cultural, semiotic meaning of these chairs forms a connection between China's past and the 1001 Chinese residents who agreed to travel, participate and perform in the exhibition. Here, Wei Wei observes a fine balance between aesthetics and semiotics to explore themes of identity, displacement, and agency.

Other examples of observationism, implicating meaning both on and beyond surface appearances are not hard to find: In 2019, Edmund De Waal created two off-site works at the 58th Venice Biennale; *Library of Exile* and *Psalm*. Placed in the Ateneo Veneto building, (a centre for cultural debate since the 15th century), *Library of exile* was a porcelain covered pavilion, housing up to 2000 books by exiled writers from Ovid to Oscar Wilde and other modern authors. Intended to be a contemplative reading and resting place, visitors were invited to list exiled authors that they know from all over the world. Symbolically highlighting the recent burning of libraries at Mosul, Iraq and Aleppo, Syria, the names of these and other libraries lost to the world are inscribed onto the pavilion walls.

*Psalm*, was de Waal's other site specific response installed in the Women's Gallery at the Canton Scuola Synagogue and Jewish Museum in the heart of the Venetian Ghetto. This took the form of 12 elegant vitrines containing extremely delicate porcelain vessels. Thin enough to be semi-translucent these vessels ambiguously suggest either religious or domestic ceremony, positioned with sheets of gold leaf. Suggesting the Japanese art of *Kintsugi*, (where repaired cracks in ceramic are highlighted with gold), de Waal finds agency in the act of repair in both of these works, saying "You can't erase damage, but you can show the fault

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<sup>15</sup> Bohm, David. Wholeness and the Implicate Order. Routledge & Kegan Paul. London. P. 227. 1980.

line.”<sup>16</sup> Here, de Waal uses a mixture of semiotics, symbolism, and metaphor to lead the viewer beyond surface appearances and contemplate deeper meaning and interpretations.

A way of looking that sees both on and beyond the surface of things, observationism allows us to approach artistic, technological and philosophical, questions directly through materials. Viewing materials in their broadest sense, they remain open to being artefacts of any description, including archives, histories, infrastructures, and the virtual realm.

Briefly describing examples of observationism from a number of perspectives that include cognitive science, artistic research, philosophy and quantum physics, how we become observationists rests with the individual and is defined by the unique subjective lens of the viewer. 20th Century art critic and theorist Ernst Gombrich calls our subjective experience ‘the beholder’s share.’ This allows observationism to fuse different fields of our experience towards innovative discoveries, absorbing new insights and observations as they come to light. Defining observationism as an ‘open toolbox’ we can all easily use, it is my hope to open up this style of artistic research to other fields as a complimentary and parallel research tool alongside traditional research methods.

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<sup>16</sup> [https://gagosian.com/quarterly/2021/01/19/video-interview-artist-artist-edmund-de-waal-and-theaster-gates/?utm\\_source=Facebook&utm\\_medium=Social](https://gagosian.com/quarterly/2021/01/19/video-interview-artist-artist-edmund-de-waal-and-theaster-gates/?utm_source=Facebook&utm_medium=Social)