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Vision-Space

Perceptual condensation within contextual field

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Abstract:

To break our over reliance on records produced by instrumentation, it is imperative to produce stimuli based on perceptual structure and the human umwelt through which we fashion our relationship with the real. In previous publications I have carefully tried to tease out and 'render visible' almost one-by-one, a raft of differentials between experiential vision and optical projection or picture space while always retaining sufficient pictorial elements to avoid the exercise being dismissed as 'creative subjectivity'. In this paper the drawings and paintings aim to simply record what is occurring to me without reference to arbitrary geometry, conceptual consideration or pictorial convention and to show just how far removed one is from the other. One of the biggest issues relating to the phenomenon of vision remains how we package all the information that occurs to us. How does the phenomenon, the relationship we form with the real, present? Somehow we present very significant scale changes across the phenomenon or engage in perceptual abbreviation that doesn't seem to interfere with our comprehension. We are truly engaged in multi-layered, creative processes of engagement and realisation heavily reliant on neural feedback circuits, learned experience and careful choreography involving composition dependent on our intent in the world.

Traditionally processes developed by artists are subsequently adopted and 'deployed' by others as 'communication tools', the carriers of content or meaning. Hence a new form of illusionary space is a big deal. It changes the fundamentals of how we communicate while revealing new aspects of our developing relationship with the real. The invention of the camera has interfered with that relationship.

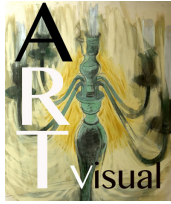
As indicated, some visual artists and I am sure some musicians, have kept the faith in a world dominated by third party observation and a conceptualised notional reality to provide us with the essential groundwork for change. We need to found a system of communication that works in accordance with the fascinating capabilities and efficiencies of experiential reality. There is clearly a great deal that we simply do not currently understand about 'observation'. It's equally clear that instrumentation does not stand in for experiential reality. What do the records made by instrumentation actually mean?

What's in an artificial stimulus? Ans: Our limited understanding

(Vision-Space presentation <http://youtu.be/9ryFnuFCGys>)

It is imperative to produce stimuli based on perceptual structure and the human umwelt. The records detected by instrumentation lie almost entirely outside the set. We seem to have forgotten this, indeed we appear to be compulsively driven to forget this.

In previous Vision-Space presentations I have carefully tried to tease out and 'render visible' almost one-by-one, a raft of differentials between experiential vision and optical projection or picture space while always retaining enough pictorial elements to



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avoid the exercise being dismissed as 'creative subjectivity' by viewers who's reference points will inevitably be firmly embedded in the paradigm 'delineated' by instrumentation. It is after all far more comfortable to engage in apparent variations to a 'known' existing system than it is to be confronted with and migrate towards a new unformulated position. Why bother? I hope that I have produced enough now in terms of artwork, papers and presentations to clearly articulate why we should bother. The so-called 'deformations' seen in artwork are showing us flashes of perceptual structure. This process has also been a journey of enquiry for myself as I try to negotiate the well rehearsed positions and arguments that keep us on the 'straight and narrow'.

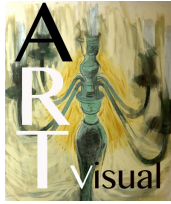


My nose profiles!

Drawing from the studio 2015



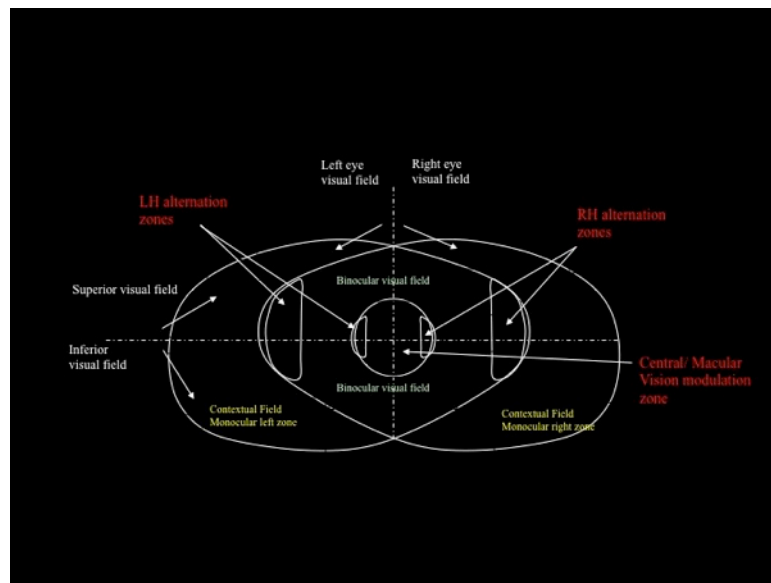
St Ives, Cornwall 2015



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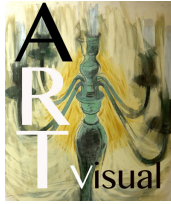
The drawings and paintings in this presentation simply record what is occurring to me without reference to arbitrary geometry, conceptual consideration or pictorial convention. We are no longer journeying on some vague heading we are residing at the destination to look back upon the former paradigm. Vision-Space is a new form of illusionary space. We are no longer comparing and contrasting between independent points of order safely couched within the vernacular of optical projection. We have disentangled the strands to understand that we should set one of the systems aside; it's superseded as we can understand that it's not producing valid stimuli with respect to human visual perception. Virtual reality is a miss-concept; while embedded within the environment (the real) we generate reality as biological systems.

One of the biggest issues relating to the phenomenon of vision remains how we package all the information that occurs to us. How does the phenomenon, the relationship we form with the real, present. We have previously looked at data structures and the processes of information exchange taking place within phenomenal field and even some of the deployed compositions which are themselves dependent on our intent in the world.



More recently¹ we have seen how we stretch in the 'y' axis within the area of phenomenal field supporting binocular coverage but there is still a big issue remaining to be confronted that once understood and seen in conjunction with all the other facets will clearly disengage Vision-Space from picture space. They are entirely different animals, one essentially conceptual to be fed into our perceptual system as stimuli to confirm the veridical nature of the assumption that fired the concept and the other perceptually driven capable of making us confront important aspects of the relationship we form with the real and hence the nature of experiential reality.

¹ Vision-Space: Land and Sea Scape, Camusterrach, Western Highlands
<http://youtu.be/zr38-ibFwcU>



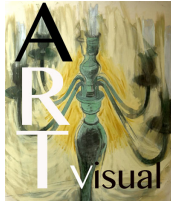
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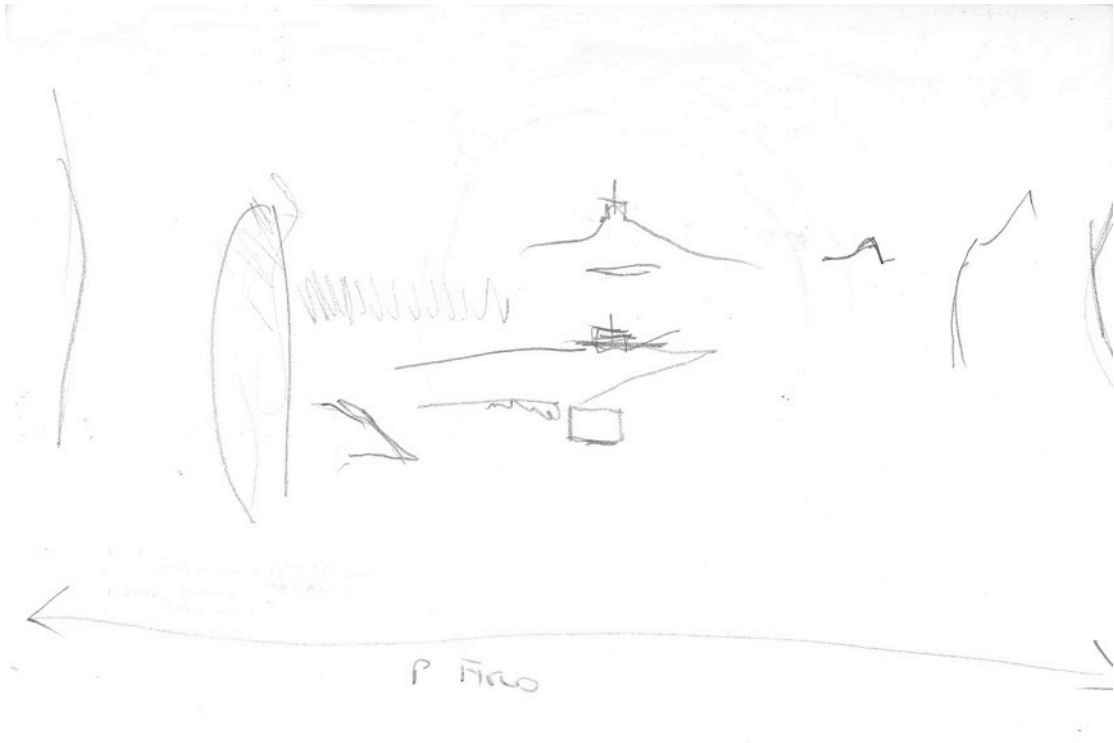
I took this photo a couple of weeks ago. This is not what I saw when stood in front of the scene. The differences are simply too great for vision to be just some derivative of optical projection dependent on simply the rectilinear propagation of light.



Even with additional shots to make up the panorama the ensemble has almost nothing to do with the experience.



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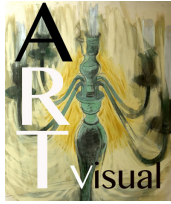


Sketch 'nailing' some cornerstone relationships

This sketch captures very basic experientially derived information about the scene. It reveals the lengths to which anyone wanting to render the scene in accordance with the phenomenon from photographic media (+ depth data) will have to go!



Reduce context by 50% in 'X' axis. Stretch stereo zone in 'Y' axis + magnify



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Reduce both context content and binocular area content in the 'X' axis.

Somehow we present very significant scale changes across phenomenal field or engage in perceptual abbreviation that doesn't interfere with our comprehension of the scene. We are truly engaged in multi-layered, creative processes of engagement and realisation heavily reliant on neural feedback circuits, learned experience and careful choreography involving composition dependent on our intent in the world. All of this activity is dependent on cues that are themselves developed through one-way diagnostic processes as opposed to processes akin to optical transfer that could in theory be retraced back from percept to the retina and a notional 'projected' picture. All of this has to be achieved with maximum efficiency. There is clearly a great deal that we simply do not currently understand about 'observation'. It's equally clear that instrumentation does not stand in for experiential reality.

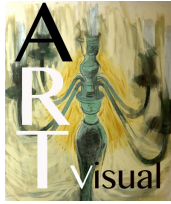
In a previous presentation I painted the landscape of Camusterrach in the western highlands.



View for Camusterrach 2015 <http://youtu.be/zr38-ibFwcU>

I was highlighting for consideration the stretch in the 'y' axis in the binocular zone. However, there are 3 fixations across the scene and 3 paintings used to capture the extent of the scene. Within the phenomenon we are able to pack almost the entire extent of scene depicted on all three canvases into one experiential encounter or 'view'! How do we accomplish that?

We must engage in some form of perceptual compression within the extremities of contextual vision that we currently and inappropriately refer to as peripheral vision: its contextual vision. I say 'compression' as though this is some function that can be imposed upon a base picture. This is not the case. There is no 'picture' to compress, optical projection doesn't occur, so I have plumbed for 'condensation' but considered



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'local consolidation' as I think that speaks to neural function and Bayesian processing if not to the global level of comprehension? If anything, I would suggest that this has some physiological derivation and that we have learned to manage, extrapolate or unfold from. We 'infer' from the condensed presentation enabling us to comprehend a proportioned scene. If this activity occurs when looking at a landscape then those same systems will also be in play as we observe objects within a closer environment. The condensation processes must form a fundamental facet of human perceptual structure.

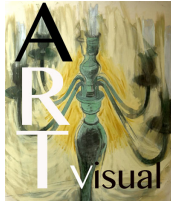


View from the studio

As I look out of the studio into the garden I can record the scene with a camera.



Composite view



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I can direct it to take multiple shots to compile to some sort of pseudo experiential view but it looks unconvincing!



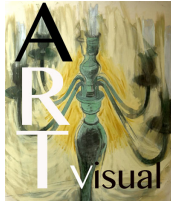
Step back to obtain the remote 3rd party view

Otherwise I can step back and play the 3rd party remote observer that science traditionally adopts through its instrumentation but this is also not what was seen.



Drawn while fixated on the centre of the tabletop

Or I can draw what's actually occurring as I stand at the observation point and intuitively record experiential reality. The preferred option surely?



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Note that I am not trying to depict the spatial texture of implicit spatial awareness, instead I am concentrating on the 'condensing' occurring within contextual field. I use 'line' as Cezanne uses it, to denote 'the probability that', a situation where the lines then often lie on the surface of the paint not to guide the placing of the paint on the canvas. The 'line' was not 'transcribed' it was arrived at following presentation and evaluation. What's depicted in the intuitive record has next to nothing to do with optical projection or picture space: this is Vision-Space.



The phenomenon



The camera record

Look at the tabletop. Look at the height and width of the two identical sections of the glazing system.

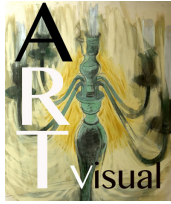


The phenomenon



The 3rd party view

Look at the paint cans set out on the floor. There is significant condensation occurring through contextual vision. At the extremities the width of objects is more than halved, yet in the centre there is a considerable stretch in the 'y' axis that makes it look as though we have somehow slightly changed our viewing angle. Yet we don't 'notice this' as it's occurring to us. We don't have the 'picture' record to hold against it. We are able to extrapolate from the consolidated presentation what we need from the scene. It may be that past experience of and our innate understanding of our perceptual structure enable us to know how to 'deduce' or 'extrapolate from' the consolidated data the corrected proportions? In reality we can of course make

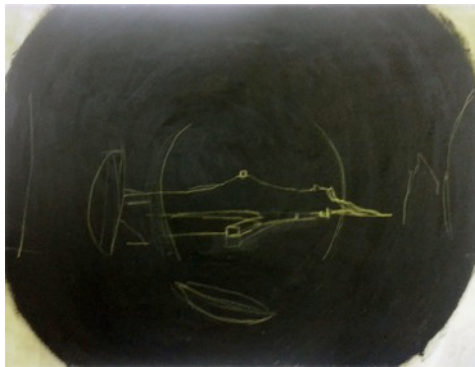


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multiple fixations and by so doing 'unfold' the condensed areas making visual appreciation an activity we engage in and not something that we simply 'detect'.

So too the painting of St Ives, what did I do?

I took the very basic line drawing and used the very limited but 'key point' markers as the cornerstones and fitted information from the photographic record around them.²



The key relationship points from the drawing



The basic areas



Setting the field structure



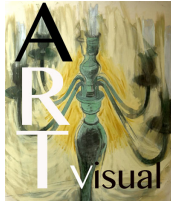
Completing the composition

When this was completed I turned back to the photographs and 'photo shopped' them to fit the intuitive record. The ontology here is correct. Quite a difference!

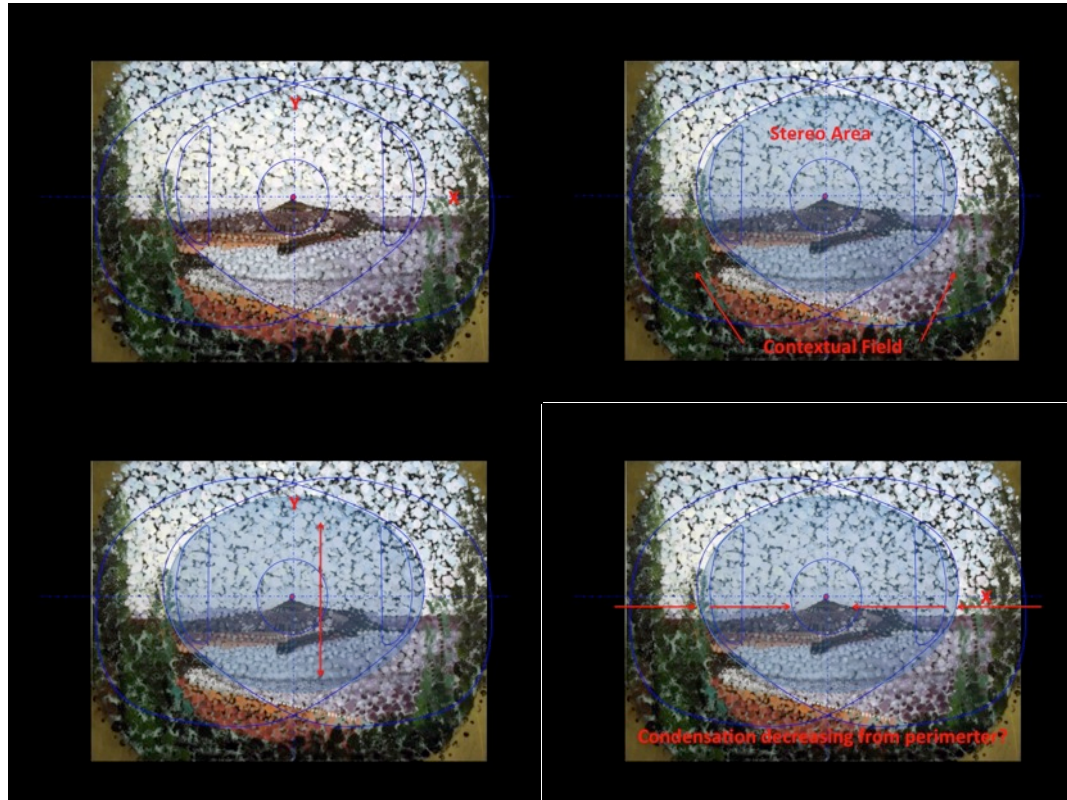


I pushed the photograph composition further to fit the painting! Just fixate on the hilltop – there are possible associations here with fish eye lenses and also the disproportionate presentation of central areas of visual field within visual cortex?

² I am not going to address issues relating to the field structure of Vision-Space here, refer to other presentations and publications.



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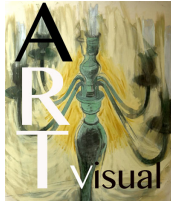
Reduce the extents of phenomenal field but retain the extents of visual field

Is the painting closer to a visual encounter on which should we base our stimuli and information display technologies? I can tell you that it is, demonstrate that it is and set out the data structures so we can model visual awareness and explore the system. We can then at last present our perceptual system with 'valid' perceptually structured stimuli?



Records from: our precision instrumentation....or, an intelligent sentient being or biological system to which vision occurs? It's a 'no-brainer!'

To help us understand this in terms of a 2D artwork we must first consider, what 'is' a blank piece of paper to us?



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The world lived and recorded, fixation by fixation, will not add up to picture space.



Cezanne- Large pine tree, The Hermitage



Giacometti- Diego Seated 1948

Picture Space is a conceptualisation, an imposed geometry, a 'stand-in' for experiential activity. Its some sort of abbreviated and abstracted summary of what can be deduced. This 'summary' may be useful but it keeps a massive amount from us pertinent to our relationship with the real. We should get back to first hand accounts from the human umwelt. The total reliance on photographic media and our other forms of information capture must be re-evaluated.

'...the lived perspective that which we actually perceive, is not a geometric or photographic one' Merleau Ponty

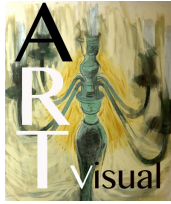
Addressing a blank piece of paper



In one sense the piece of paper is an object of course in just the same way that a vase is but we have developed an ability to suppress its physical continuity within the environment to 'read' marks rendered on its surface as though they re-present real objects like vases, pipes and faces. The blank sheet holds the potential of 'notional space', the potential for fiction and creative engagement through that fiction.



For a long while it has been important for us to engage in these creative processes as they indicate not just the depicted subject matter but also how we are thinking about the world. Through this activity we engage with our environment and ourselves manifesting the relationship we form with the real. This relationship 'is' reality. Reality occurs to us and not to a rock or to our instrumentation. The rock is real as is the camera. The function of the camera produces 'pictures' according to the physics of



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optical projection alone. Paintings on the other hand communicate our engagement with the real and to others who are similarly equipped (a shared umwelt) to recognise and identify with both the processes involved and the subject matter being depicted. Both these elements constitute 'content'.


Pictures and Images

Abridged quote

Picture being: "a real representation, an ordered record, such as a video-signal, a photograph, an activity pattern in a neural structure. The order of the picture is purely conventional and exists only with respect to an external agent."

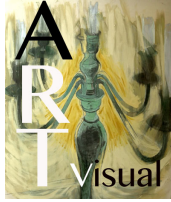
Images: "always contain **more than** pictures because the whole structure of the receiver (a lifetime's experience) is summed up in them."

Jan Koenderink



*Self Portrait, 1889, Van Gogh,
Oil on Canvas, Musée
d'Orsay, Paris*

Traditionally these processes developed by artists are then adopted and 'deployed' by others not directly engaged in their realisation as 'communication tools', the carriers of content or meaning. Hence a new form of illusionary space is a big deal. It changes the fundamentals of how we communicate while revealing new aspects of our developing relationship with the real. The invention of the camera has interfered with that relationship. I posed the following question on Research Gate recently to almost complete silence: *Has the invention of the camera been biggest single roadblock to our developing understanding and the progress of knowledge?* Vision-Space is a new form of illusionary space that re-establishes the linkage between us and information display. It's potentially a renaissance moment presenting a paradigm shift for our communication systems and the way we interact with them. If the theory is correct there are also implications for our information capture systems.



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For the cave painters the walls of the cave were not equivalent to blank sheets of paper. Their marks on the walls (the cave being part of the world they inhabited) were attempts to rationalise their lives lived within the world. There weren't any pieces of paper, no abstract space to be filled in and they were not abstracted from the world as third party observers. They often found the contours of animals in the rock surface and then embellished. Their work was less a fiction and perhaps more embodied action within the world? My family and I am sure so many others, still engage in this process by finding animal and bird forms in naturally forming tree roots. It's fun!



Otter-branch

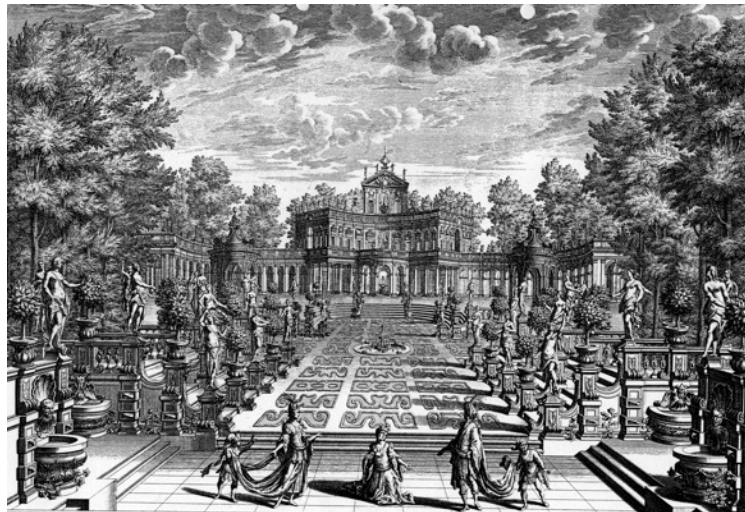


Bird-stick (Louise & John Jupe)



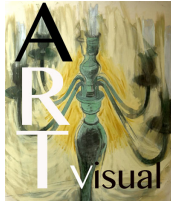
Fish-stick (Louise & John Jupe)

For the renaissance picture painters, setting out perspective views on canvases and pieces of paper there was indeed an abstract space and they were envisaging third party observation of their world. Paradoxically, perhaps the start of the so-called, art/science divide?



Central perspective drawing

The world was there to be viewed and re-presented through the geometry of central perspective. There was no place for 'subjective' content. The projected real was 'reality' and the real was there to be poked and prodded and the process migrated to observation at remote scales. Optical projection was itself projected over visual process, visual perception and our reliance on instrumentation extended to the universe and the micro scale. Instrumentation and information display systems extended the conceit to form so-called 'virtual reality' where the notional aspect of the system being deployed was entirely 'forgotten'. The ontology of 3rd party observation created a hall of mirrors.

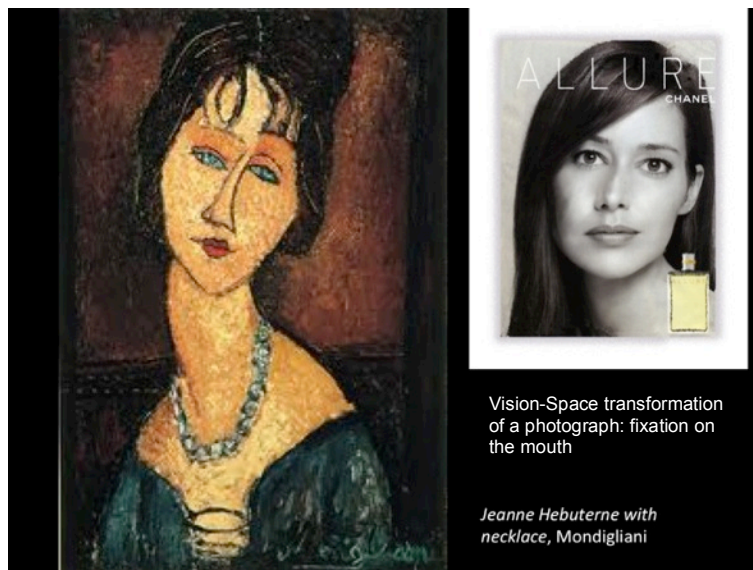


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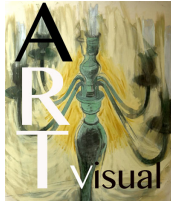


Virtually Blind JJ (View right to left?)

For the modern artist these re-presentations proved hollow. They were not actually presenting 'how' we realised our environment or even to some extent 'what' we were realising about it.



It became important again to address the relationship we form with the real and reconnect with the formation of experiential reality. Recording pictures is not linked to the human umwelt, so around the 18C artists started the process of reengaging with the realm of 'image making' where as biological systems they generated and recorded experiential reality rendering visible evidence of the relationship.



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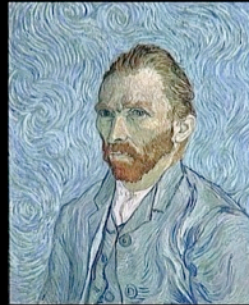
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Picture being: "a real representation, an ordered record, such as a video-signal, a photograph, an activity pattern in a neural structure. The order of the picture is purely conventional and exists only with respect to an external agent."

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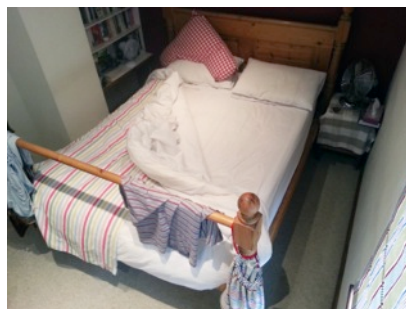
Jan Koenderink



Self Portrait, 1889, Van Gogh, Oil on Canvas, Musée d'Orsay, Paris

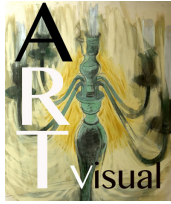
We as sentient beings are embedded within our environment in complex ways as we are in these paintings. Our instrumentation isn't. For us to make sense of the world and universe we need to come to terms with what's actually involved in an act of observation. We need to deploy the understandings that tumble from the engagement.

So our relationship to the blank piece of paper changes. The progression we see through history forms an important touchstone and indicator for cultural development and this culture includes science. Progression is an indicator of a healthy culture. If development stalls then the chances are that our culture has stalled.



Photographs of Tracy's unmade bed are © so I hope this will do! On the up-side, at least I built this one but it's true; the original is messier and currently shown alongside Francis Bacon's fantastic paintings. The Tate Modern Gallery can't spot the issue! <http://www.tate.org.uk/about/press-office/press-releases/tracy-emins-my-bed-returns-tate-britain-first-time-15-years>.

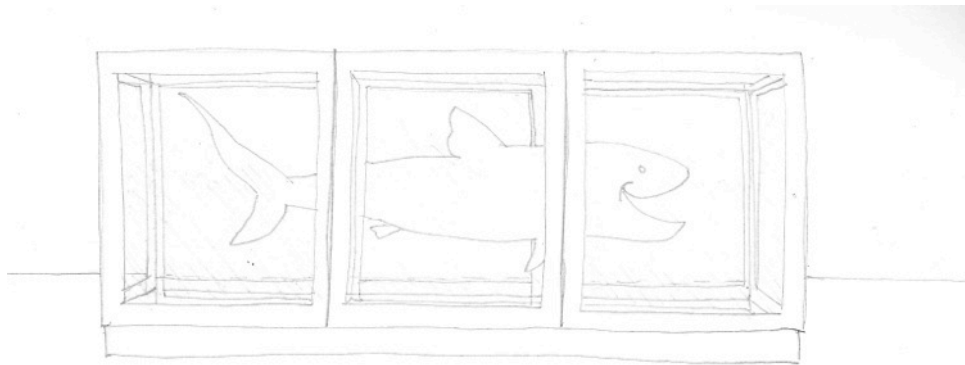
In that context the indications are that we have stopped 'looking', that we have stopped engaging. We have deferred to our instrumentation, the concepts on which they are based and the way these are then fed back into our approach to the world and subsequently then out again as 'art' or 'results' is entirely devoid of engagement. We are at some sort of crossroads and we need to shift ourselves out of the rut, or out of the grove, we need to get out from the hall of mirrors we have inadvertently setup for ourselves. The art establishment are not going to help us achieve this, the



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discipline has been hijacked, so I am relying on the science community. The progress made in our understanding of perceptual structure via intuitive record and psychophysics needs to fight its way into technology and hence back into general circulation. Blow back!

As indicated, some visual artists and I am sure some musicians, have kept the faith in a world dominated by third party observation and a conceptualised notional reality to provide us with the essential groundwork for change. We need to found a system of communication that works in accordance with the fascinating capabilities and efficiencies of experiential reality. By addressing a piece of paper differently and linking this to the work of key scientists developing pertinent insights into the nature of vision and experiential reality we can set about the systemisation of the processes to develop information display that does work in accordance with our perceptual system. We can then use these understandings to further interrogate experiential reality, the human umwelt, our psychology and even remote scales. No more stuffed fish and unmade beds!



Photographs of Damien's stuffed fish are © so here's a drawing. <http://www.damienhirst.com/the-physical-impossibility-of> My fish-stick (above) is actually 'art'?

John Jupe 2015

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Other publications and online presentations available on the PAC web site

https://www.researchgate.net/profile/John_Jupe4

<http://loop.frontiersin.org/people/118197/overview>