

Observer Error and the Ecology of Representation.

The Dryland Transcoder. James Charlton.



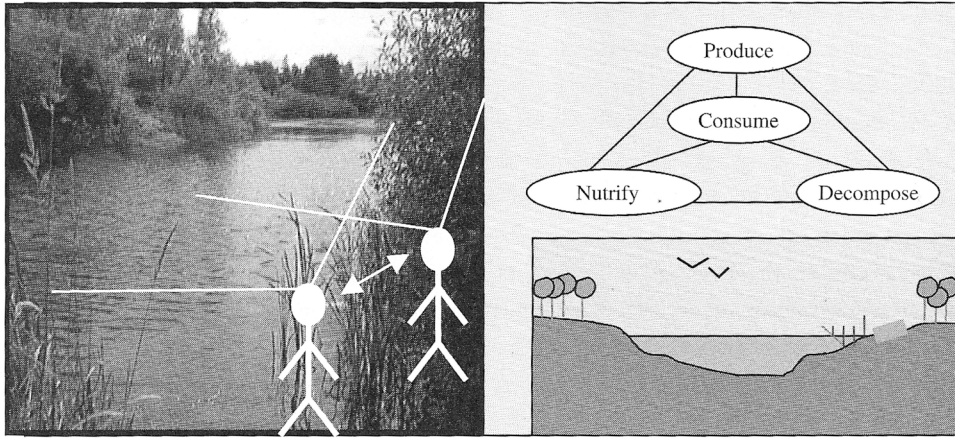
Measurement is an inherently inaccurate process that renders results contestable. Representation of that which is measured layers subjective interpretation on top of “observational” error and opens the door for “the fantastic”¹ within the scientific.

Like using a foreign currency to pay for a trip to the movies the scientific economy lapses into the fantastic at the moment of representation. How then do we deal with the exchange between that which is and that which we represent and claim it to be factual?

In this exchange of currency there is loss of value. What happens to this loose change that observational error lets slip through our fingers? Does it simply roll across the floor and under the door never to be seen again, or is there a residual “Bank of Errors” where the transaction fee between the actual, the measured and the represented is stockpiled?

If hermeneutics requires recognition and understanding of parts as discussed by Paton (Paton. 2006) then knowledge of subject requires a closed system not one in which loose change is accounted for by Swedish rounding.

¹ The term was originated in the structuralist theory of critic Tzvetan Todorov in his work *The Fantastic*. He describes the fantastic as being a liminal state of the supernatural. A truly fantastic work is subtle and leaves the reader with a sense of confusion about the work about whether or not the phenomenon was real.



(Paton. 2006)

For Paton modelling relations and diagrams are the key to multi-modal interactions between explanation and interpretation. (Paton. 2006) The model then operates as a representation or measure of the relation between parts. Filling the gap between the explained and the perceived and becoming an object of the unseen.

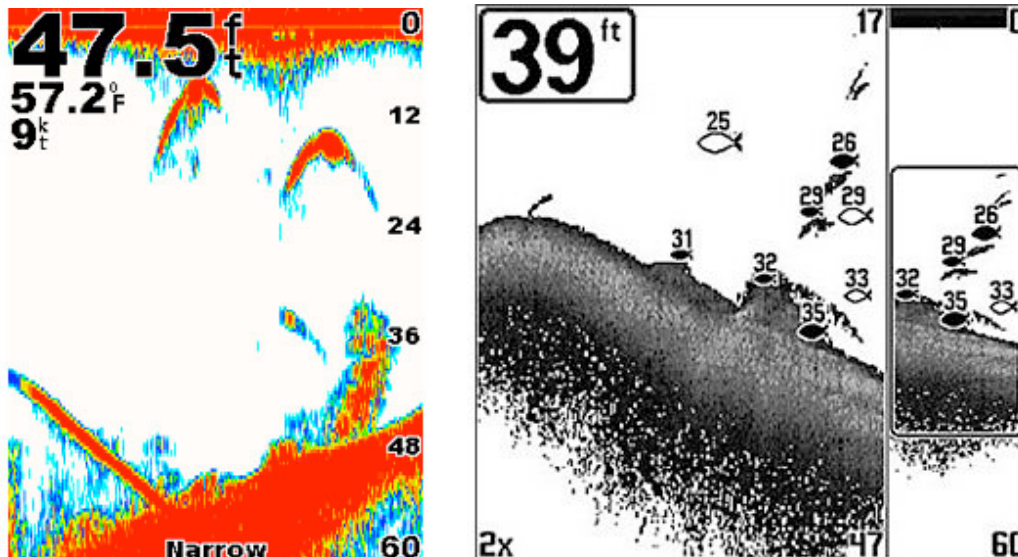
The Dryland Transcoder attempts to deal with this accounting error by proposing a tool for visualising the unseen. – the moments of the fantastic missing from representation. In attempting this it presents not a factual account but a farcically fabricated fantastic that is perhaps no more distance from the actual than the observed is from the subject.



Beneath the Unseen.

Local knowledge once fishermen's guarded porthole to the seabed, has been usurped by technology. Fish finders now installed in most recreational boats penetrate the veil of the waves while the nautical equivalent of Twitter (www.WorldFishingMap.com.) provides access to the bedrooms of the ocean floor and all the secrets it once held. Technology allows us to peer beneath the waves where once only hooks and could go.

Bouncing sound waves of underwater objects, fish finders extrapolate and interpret distance. Initially depicting fish merely as painterly gesture through the ocean, contemporary fish finders now show the catch of the day as icons depicting not only depth but also size and in some case likely species.



Fishing has become a conceit of the fantastic in which the “duration of uncertainty” (Todorov T. 1975) is forgotten in the representation of the measured.

“The fantastic is that hesitation experienced by a person who knows only the laws of nature, confronting an apparently supernatural event.” (Todorov T. 1975)

The Dryland Transcoder is a custom-built fish finder that uses an ultrasonic transducer to measure the distance of surrounding objects. Interpreting this data as a fish finder would map icons of fish to a slit-scan 360 image of the terrain. What appears is a fantastic landscape in which nature merges with the representational, photographic with the symbolic, scientific with the perceptual.

Technical.

The Dryland Transcoder software (written in MAX/MSP) captures a single column of pixels from video input supplied by a web cam mounted just above an ultrasonic sensor. As the unit is rotated on its axis a landscape is compiled. As this is a manual process the rotational speed causes dislocations in the image allowing repetition or compression of objects in the image. This is seen most readily in the appearance of the artist in multiple locations and the disfiguration of cows. While still images appear as a photographic moment time is not continuous but is to read linearly as suggested by the progress bar.



Overlayed on this warped landscape icons of fish appear as the ultrasonic bounces back data acknowledging the presence of the unseen. That appearing closest to the centre of rotation is placed at the top of the image while distant forms are represented by icons at the bottom. Emerging from this scan we find a compilation of the representation that mixes ecologies of representation as readily as we blend the actual and the fantastic. Occasionally we will see shoals of fish lingering around the base of tree trunk or swimming freely with a shoal of cattle.

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Todorov T. *The Fantastic: A Structural Approach to a Literary Genre*. Ithaca, New York: Cornell University Press, 1975.

Paton R. *Metaphorical Dimensions of Diagrammatic Graph Representations*. In *Aesthetic computing*. Paul A. Fishwick. Cambridge, Mass. : MIT Press, 2006.