

Towards a Pre-Representation

A. Halliday

TOWARDS A PRE-REPRESENTATION, All rights reserved. The reader may not reproduce, or by any means copy, electronically or mechanically, this text. Neither may it be transmitted, in any form, either in part or in its entirety, without the written permission of the author.

Copyright © A. Halliday 2017

First published in digital format in 2017

All 'information' from the real world is simple and minimal. Once that information is in the 'visual' processing system it is, on following the general thinking, translated into a patchwork of colours often referred to as the Representation. It is also thought that that same system constructs the Representation as data passes through it.

In this paper I will argue that what is perceived as the Representation is not formed out of sensory-data directly. Instead, I will argue that a more fundamental structure, that I have named the pre-Representation, precedes the Representation and is formed from an accumulation of sensory-data, what could be referred to as *sensa*¹.

The philosophy of perception contains two core problems: first, how can a fixed², physical-processing system translate information into a significant, phenomenal representation of the real world? That world, a constantly changing environment, is much too complex to be contained in individual packets of absorbed information.

The second problem is colour. Although all colour is made in the processing system, how can that system form colour into the phenomenal contents of the Representation? At any one moment what is represented might be a landscape, and at another a painting in an art gallery. To ensure accuracy and realism in, and under, all environments, something extremely complex must happen to ensure the perceiver has a 'veridical' representation of a 'something' in the real world³.

As information passes into the processing system, it becomes remote from the world. It is remoteness, possibly that more than anything else, that is at the core of the problem of perception. If the processing system cannot know what the 'source object' looked like then, can that same system model 'realistic', phenomenal contents on that unknown source? Similarly, if it cannot 'know' of real world objects, then the same system can do no 'likeness' tests; for example, by comparing contents-in-the-making against those remote objects.

Perception is not only the problem of what the perceiver can know of the real world. What the perceiver knows is founded on the veridicality brought to perception by the visual processing system. Yet, it 'knows' nothing — indeed, can have no 'knowledge' of any kind — of what happens during

1 By 'sensory data', I mean the signalling transmitted from the remote senses, such as the skin receptors or the retina, through the processing system and on to climax colour in the pre-Representation. I do not want to confuse sensory-data with what appears in the Representation itself.

2 By 'fixed', I mean that it has reached its maximum, physical development. Generally, the processing system has matured at about six months of age. It then undergoes a much slower rate of development into adulthood.

3 Here, I am talking generally.

both pre-vision and mid-vision – in advance of the perceiver?

To go further, neither does that system have an internal 'object-pattern' database, templates, against which a new patch of colour can be 'modelled' as it progresses through that system. In other words, they have no psychological, stored copies of all of the 'known' real objects. If they did, where would those basic patterns come from? Where might they be stored in that system? If that is conceivable, they would add another layer of complexity to a system that is already very complex?

There is a conceptual gulf between minimal information and the contents of the Representation. And, that gulf is greater between that real information and the Representation. In effect, each piece of information is minute while the Representation is visually maximal. It is natural to assume that the processing system does all of the work of building the Representation. Once information enters that system, there is nothing else to create the phenomenal structure that is our 'visual' world. Indeed, the phrase 'visual processing system' implies that it alone creates what is given.

One of the aims of all fields of investigation is to simplify the real world to a human-understandable level. Therefore, if the gulf between information and the Representation is so huge, might there be an argument that helps to explain away, and at the same time simplify further, the unanswered problems inherent in mid-vision?

Could it be argued that the visual processing system does not, in fact, build the Representation? Might there be an argument for a much more fundamental structure, a pre-Representation. That structure could also be referred to as a ground⁴. As argued earlier, it cannot be posited that the processing system builds the Representation. It cannot know, for example, what a chair and table look like. The gulf between information and the Representation is too great. Given the above, how, then, should the pre-Representation be thought of?

The pre-Representation is a 'bridge' between fully-processed sensory data⁵ and the Representation. It would be a structure at, or very close to, the end of the visual processing system: of mid-vision. Although it would be integral to the Representation, it would be a simple 'container' of colour.

⁴ This 'ground' would be similar to the painter's ground: a layer of, usually monochromatic, paint that is applied to the canvas prior to the painting of a subject. The purpose of the ground is to modify the colours painted onto it. (The painter's ground is often white or black but colours are often used, depending on the final effect desired.) However, in perception, the ground could be 'multi-coloured' to match the visual processing system's interpretation of objects in the real world.

⁵ Not all sensory data reach the Representation. Much of it is processed out both before it enters the main processing system and as it flows through that system.

Perhaps, it could be described as an ‘accumulator’ of processed sensory-data: of *sensa*.

As a simple, patchwork of colours it would have no contents. Indeed, it could be thought of as the opposite side — perhaps, as the candle wax — of the Representation. An analogy is not that of the heads-and-tails of a coin but of a multi-coloured, ‘blank’ coin that has not, as yet, had its face — the Representation — stamped into it. The material of the coin is the pre-Representation. [I don’t want to over simplify and suggest that the Representation has two discrete sides: a front and a back and, possibly, a ‘grey-area’ middle. In effect, I see both sides as a single structure.]

With a pre-Representation, the problem of the very minimal range of information becomes explainable. The role of information, then, is not the carrying of the complexity of real objects but the transporting of a minimal quantity of information that the processing system evolved to translate into colour. The making of colour is sufficiently complex to tax the processing system to near its maximum.

In content building, there would be no need for stored models, models that would make the processing system ever more complex. There would be no need to consider how a remote system can ‘know’, in advance, which contents should be constructed.

A datum in the pre-Representation would represent one point of the ‘colour’ of an object⁶. As each is put in place the processing system would not ‘know’ beforehand what it is or what it represents. There can be no ‘knowledge’, pre- or otherwise, in a mechanical system. A number of datum would be, on the pre-Representation, simply, coloured points. Those that are grouped would form patches that would vary in size: from no larger than a few datum, possibly not perceivable, to larger areas of uniform colour that could fill most of that ground.

Each datum would be in the correct place. Therefore, the placing of colour would be the secondary role of the processing system after colour-making. Colour-making is primary to perception. The pre-Representation would be constantly refreshed while looking happens⁷. Each datum would arrive separately, therefore the whole of the pre-Representation could not be simultaneously updated⁸.

6 The ‘information’ in a single light wave cannot carry all of the ‘colour’ of an object. Therefore, a single patch of perceivable colour should be thought of as constructed out of many, possibly millions of, discrete packets of ‘information’. The role of the processing system, then, would be to unify all of those into what would become a coloured patch that is part of a content or is content.

7 Therefore, there is also an argument that the basics of perception is a question of what, where, and when: i.e., what colour, where should it be placed, and when does it arrive.

8 Environmental changes reach the perceiver at different moments. Think of a sun-bathed landscape: on the near decking are tables and chairs; in the far distance, green hills. A shadow passes over the hills. The

Generally, perception is thought of as an immediate experience. It is also clean and very smooth (A standard cinematic analogy might be, flicker-free). Positing a ground would allow time for minor changes in the pre-Representation prior to perception of the Representation. Sensory data, *sensa*, would have time to accumulate so that any change made to the ground would have to reach a minimum significance before perception of real change appears in the Representation. As the pre-Representation precedes the Representation it, therefore, marks the end-point of mid-vision.

information from the now shadowed hills will arrive much later than the information from the table and chairs, still bathed in sunshine, and so on. Therefore, the pre-Representation could be important in 'smoothing out' these differences.