

**UNDERSTANDING PICTURES – A VERY BRIEF HISTORY OF PICTURES AND PICTURE MAKING,
AND HOW WE INTERPRET THEM BY MICHAEL SMYTH**

INTRODUCTION – A BRIEF HISTORY OF PICTURE MAKING

Humans have been making pictures for at least 40,000 years, with early cave paintings used for recording events and transmitting knowledge to new generations. Throughout recorded history artists have refined and developed techniques to effectively tell their story and have created guidelines for effective image making that are still relevant today for photography.

Pictures are used for informing, educating, storytelling, recording historical events, memories, communicating ideas, creative expression, propaganda and many more purposes.



Above: Early cave paintings contained both factual and symbolic information that requires knowledge to understand and interpret.

Later artists and paintings became more sophisticated and included mythological and religious representations, but were not really concerned with portraying “reality”



Above: Religious and mythological paintings prior to the Renaissance, no attempt to portray “reality”

At the time of the Renaissance artists became more concerned with portraying real scenes with real people, including use of naturalistic treatment of light. Around this time artists began using perspective as a way of trying to represent the third dimension in their work.



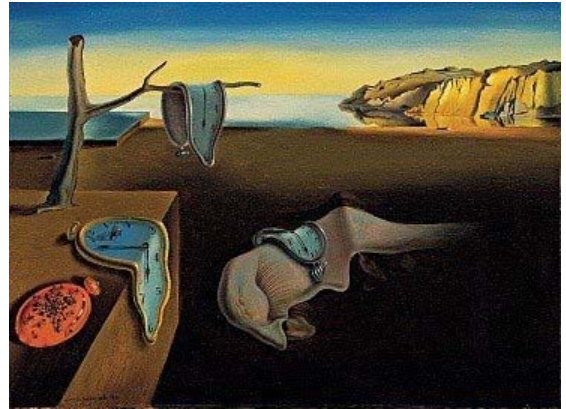
Above: Artists like Vermeer and Asher Brown Durand introduced natural lighting and perspective

In the early part of the 19th century we saw the emergence of photography and with it the myth that the camera is an “impartial observer”. Photography rapidly invaded the family portrait sphere, causing painters to look elsewhere for inspiration and expression.



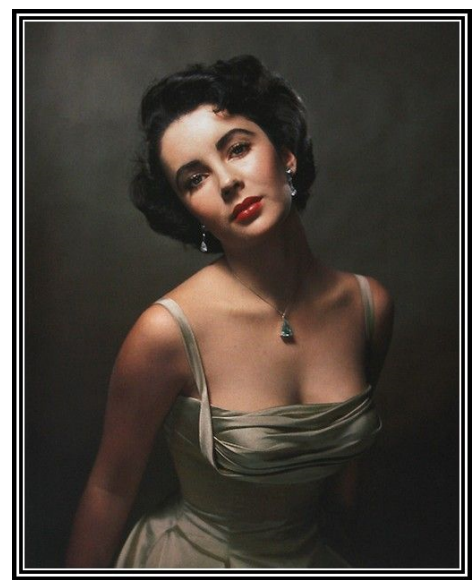
Above: The earliest known photo with a human figure – Daguerre 1827. The very long exposure rendered all the moving people invisible, apart from the man having his shoes shined. He managed to stay still enough to be recorded.

The rise of photographic portraiture was partly responsible for the rise of alternative art movements.



Above: Van Gogh's "Starry Night" and Dali's "The persistence of memory" just two examples of the new art movements that arose around this time.

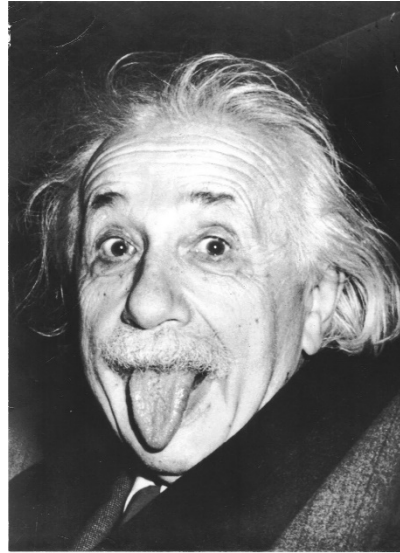
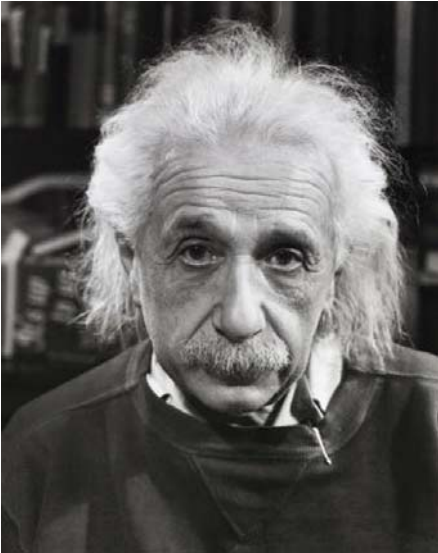
Modern photographic picture making, however conforms to the same techniques used by the old masters.



Above: Vermeer, Rembrandt and photographer Phillippe Halsman. All use the same techniques for lighting, brightness, saturation and sharpness.

Once we understand the keys to how these images were created, we can truly understand the meaning of the works being viewed. This includes drawings, paintings and, of course, **photographs**.

We also need to overcome the general perception that photographs are somehow "Truthful". This has never been the case and never will be. The camera is a simple recording tool, the photographer determines what is recorded, so it can never be "objective" or the "Truth". To quote photographer **Richard Avedon** "All photographs are accurate. None of them is the truth."



Left: Two photos of Albert Einstein. Which one is the "Truth", or in fact are either of them "Truthful" ?

Photography can be many things, but the "truth" is in the photographer's purpose, not the image itself.



Above: Two of my images. Photography can be (mostly) factual, or expressive, it depends on what you include and exclude.

Photography can also be used for propaganda or political purposes, but some photography has changed the world.



Above: Propaganda – Stalin murdered millions, he was not the lovable family man shown above



Above: Changed our view of the world. Earthrise as taken by Apollo 8 -the first time man had lost sight of the Earth.

Photography has also opened up some new techniques that painters were not aware of, such as the use of slow shutter speeds to show movement and the passage of time.



Above: Long shutter speeds give a temporal quality to an image – implying the passage of time.

WHAT MAKES IMAGES WORK ?

There are a few key ingredients that go into making an image effective and meaningful for both the artist and viewer. These include elements of pictorial design and “tricks” employed by artists and photographers to recreate the lost third dimension in an image. The intent is to create a “*believable fiction*”.

Artists had the luxury of including and placing elements within a frame to illustrate their ideas and messages, however photographers have to consider the composition and framing of their elements within the viewfinder unless they want to have to resort to editing processes to eliminate unwanted artefacts. Therefore, the act of framing and composition in photography takes on increased importance, before the shutter is pressed.

SOME DEFINITIONS AND TERMS TO REMEMBER

When we come to discuss pictures and how they work, we have some working definitions and means of interpreting them:

1. ***There is only one Subject:*** The “*Subject*” in our terminology is what the picture is about, in other words what it means or illustrates. A subject may be “Beauty of Nature” and the content used reflects what the photographer wants to show. Many commentators refer to “main subject” and “secondary subjects” , but this is incorrect, they are referring to the picture content, not the subject.
2. ***The Content reflects the Subject.*** Having decided on the subject of our image, the content or picture elements used by the photographer needs to clearly reflect this subject. Many photographs fail because the material used to illustrate the subject is not clearly defined, or identifiable to the viewer.

Ansel Adams was quoted as saying “*There is nothing worse than a sharp picture of a fuzzy concept*”

3. ***There are many forms of composition used to create an image:*** We will detail the several forms of composition later. Nonsense “rules”, such as “the rule of thirds”, “never put the subject in the centre”, “always have an odd number of elements in the image”, etc, etc, are all nonsense and should be ignored whenever they don’t suit the artist’s intentions.



Above: Two of my images. You put the main element (note – not “Subject”) in the centre when that is what is need for the image and the story.

4. ***There is no such thing as “Post Processing”:*** The term “*Post Processing*” is an **oxymoron**. You can’t process an image until it is captured (data capture), so all processing, by definition happens after the shutter is pressed. Therefore, it is just “***Processing***”. Think of a RAW file like a roll of film – the image is latent and must be processed to reveal its content. A RAW file contains a latent image that is processed in a RAW file processing program to reveal the photographer’s intentions.

WHAT ARE PICTURES AND WHAT ARE THEY FOR ?

Pictures are a means of communicating ideas and information to other people (the viewer). Pictures that effectively communicate can do so across time and distance, so the creator of the picture does not need to be present in order to transfer this information to the viewer.

Early cave paintings contained information about the environment, the animals that early man used to hunt and most probably also told stories of their beliefs and mythology that we can still read today.

Modern pictures don’t differ from these early images, other than our means and materials have changed over time. The key ingredients of information transfer from the author to the viewer remains as strong as ever.

WHAT MAKES PICTURES WORK ?

Effective images convey their information in a *clear and concise way*. Images that contain abstract ideas, emotions or other elements work because we relate to something in the picture and we have the understanding to “read” the intent of the author.

Things that work in pictures can be:

We relate to a person in the image, because their situation is the same as our experience

We respond to a common memory of an event, place or thing

We respond to a suggestion of the passage of time

A picture may evoke a memory of a person or place

A picture may tell us something about a place or situation we are interested in – such as locations, animals, events or activities that we connect to in some way.

The use of light in the image conveys a memory or emotion – such as a sunrise or similar.

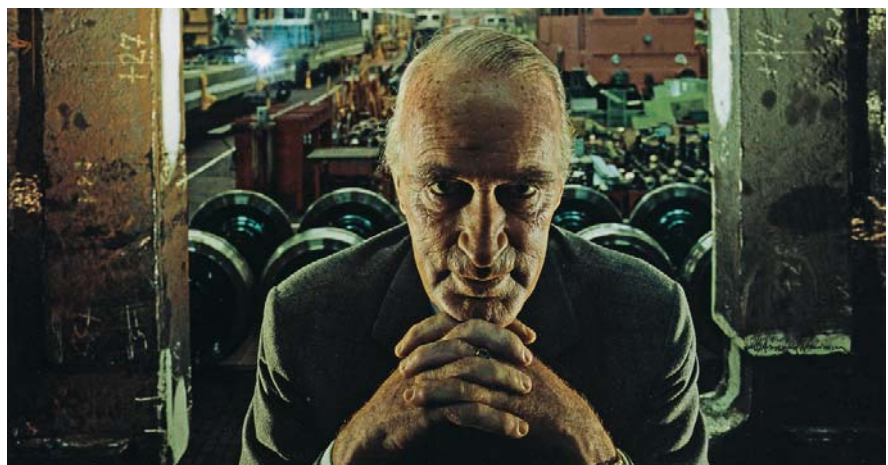
A picture conveys an observation of a humorous situation.

TYPES OF IMAGES

Pictures can contain purely factual or documentary information that requires little interpretation by the viewer as their purpose is purely that of conveying information or an observation, such as “This is what I saw in this place”.

Pictures can also convey feelings, emotions, ideas, stories and much more. These pictures ask the viewer to interpret the picture in a way that is not obvious from just looking at the content of the picture. These images require the viewer to be aware of the Principles of Pictorial Design in order to be able to “read” the hidden story.

Photographs can, of course contain elements of both types of picture, so that they can communicate on several levels.



Above: Two types of images. At left my “portrait” shows what the person looks like, nothing more. At right, Arnold Neuman’s Picture of Krupp – industrialist and Nazi supporter who profited from WW2. Neuman, a Jew saw Krupp as the Devil incarnate and portrayed him that way.

DEFINING THE TWO TYPES OF IMAGES

Images contain other images, both seen and unseen. The unseen elements in an image can be described as the viewer's response to the content – the association with the story or event, as well as understanding the implied elements, such as movement or passage of time. Complex images may include elements that stand on their own and make a contribution to the whole story.

Roland Barthes, Des Crawley and *Les Walkling* have all stated that there are two type of images, using slightly different terminology. For this discussion we will use Les Walkling's terminology for clarity:

Portraits (Les W), Documents (Des C), or Studium (Barthes)	Maps (Les W), Pictures (Des C) or Punctum (Barthes)
Portraits are concerned with a literal or "eyewitness" representation of a place, event or thing and concentrate on factual content with little or no interpretation. These pictures invite study and scrutiny to understand and appreciated their content.	Maps are concerned with transmitting meaning beyond their factual content and are concerned with evoking a response or recognition from the viewer. Maps are concerned with the emotional content and iconography (meanings) within the image. These images have emotional impact.
Examples: News photos, wildlife, people, street photography, some landscape and documentary images.	Examples: Abstract imagery, creative interpretations that do not seek to document an event, place or thing. Storytelling and messages.
These are the images made " <i>In front of the Lens</i> "	These are the images made " <i>Behind the Lens</i> "

For this paper we will use Les Walkling's terminology.



Above: **Portraits** of the landscape (my image at left, Ansel Adam's at right) concentrate on mainly factual or "eyewitness" content. The term "Portraits" are not just for people, they define a type of image making, see above.



Above: Maps examples. The Diane Arbus image of the twins and Tony Hewitt's early morning landscape contain information beyond their factual content and provoke an emotional response.

HOW PICTURES ARE "MADE"

Pictures are made by the construction of several elements and the elimination (framing) of elements that do not form part of the story or event being recorded. All photographic images are therefore "**constructed**", even if it is merely the act of framing to include or exclude specific elements.

In front of the lens are the elements we choose to include and make decisions about, the factual content that is used to construct the picture.

Behind the lens is where we make the aesthetic decisions about the image, the story, metaphor or message we want the image to tell the viewer.

"A portrait is not made in the camera but on either side of it." Edward Steichen

"There are always two people in every picture: the photographer and the viewer." Ansel Adams

Painters deliberately include and place elements within the frame to aid the story they are depicting. Photographers have to be highly selective in which elements are included and manoeuvred within the image frame, so therefore the process of identifying elements and their placement within the frame takes on more importance in photography.

Pictures follow several principles of **pictorial design**, that apply equally to painting or photography:

PICTORIAL DESIGN PRINCIPLES

Pictorial design includes concepts such as:

Size and shape of the image or picture (See Les Walkling's emotional theory of picture shape), Balance, Harmony, Repetition, Discord, Rhythm, Space, colour, form and contrast. They can be summarised by looking at the key elements of composition used to create picture:

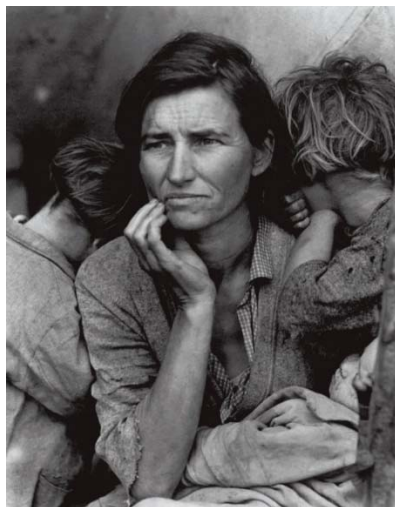
TONAL COMPOSITION

The Tonal composition represents the ***"Drama"*** in an image. Drama is created by the range of tones from light to dark, and their placement within the frame. The more tonal range (contrast) an image has, the more dramatic it seems. This stems from the fact that human vision is most responsive to brightness. Most of the cells in our eyes are only responsive to brightness, so ***Brightness and Contrast are the most important of the pictorial design tools.***

Images with a high tonal range are seen as dramatic and powerful, whereas images with lower contrast are seen as being more restful or tranquil.

To view the Tonal Composition, taking a photograph and converting it into La*b* colour space will allow us to isolate the tonal composition from the colours and recognisable forms. Turn off all but the Luminosity channel to view the Tonal Composition within an image.

Elements of the Tonal composition draw our attention and aid in forming the impression of space in an image. We are drawn to brighter parts of an image – especially where there is also the most contrast. The contrasty elements in an image also appear to be closer.



Above: Examples of tonal composition. Edward Western, Dorothea Lange and Rembrandt. Note the range and rate of change between tones gives Western's image much more energy.

Less contrasty elements appear further away – this is known as ***"Aerial Perspective"*** as it mimics how we perceive the real world. Lightness combined with softness recedes from the viewer, but bright contrasty (sharply defined) elements appear near most to the viewer, aiding the impression of the third dimension.

COLOUR COMPOSITION

Humans are less sensitive to colour, yet the colours within an image evoke the personality and the mood of the photograph. We respond emotionally to colours in predictable ways, although the perception of colour is highly individual and difficult to measure (see the separate presentation ***"Colour – Chaos and Confusion"*** for more details).

The colour composition in an image is said to represent the *“Personality”* or *“Geography”* in an image. Colours give us information about the type of person or location we are viewing, for example, the saturation of the skin in a portrait gives us a sense of how the person is feeling – “Flushed”.



Above: Landscape by Albert Bierstadt. At right an aerial image by Tony Hewitt. The use of colour defines both images.



Above: Steve McCurry's famous image of the Afghan Girl broken into Colour and Tonal compositions. The tonal composition shows the powerful concentration on eyes and face. The colour composition compliments this with a subdued background and complimentary colours that add emphasis to the face.

In a landscape, the intensity of the colours gives us a sense of the geographical location – intense greens for example suggest a lush, wet environment, whereas red earth indicates a dry or outback location.

The hue (Colour of the Colours), or Colour Balance in our image is said to represent the *“Ethnicity”* or *“Geology”* in an image. Think of a person's skin colour or a location's overall colour palette. Images that have an overall warm hue evoke energy and power, cooler hues are more restful and contemplative.

It can be said that *all colour is an illusion* and our perception of colour is affected by several factors, especially adjacent colours and the brightness of these adjacent elements.

The following are some basic principles of colour perception that are useful in constructing images:

Colour Constancy: The hue of a colour generally appears the same across a wide range of brightness.

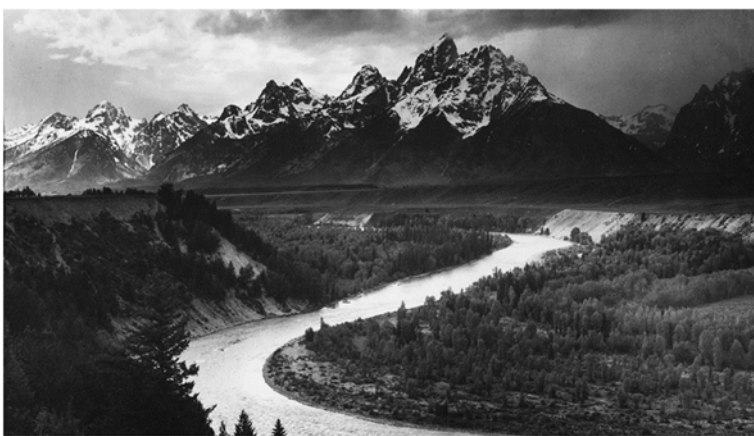
The Hunt Effect: The perceived Colourfulness (Saturation or Chroma) of an object is directly proportional to the brightness of the illuminating light source. Unfortunately, Photoshop's adjustment tools do not reflect this, and we need to correct the mistakes that Photoshop makes when enhancing images (more about this later – with discussion of various colour models).

The Stevens Effect: Contrast appears to increase with increasing luminance. Highlights appear brighter and shadows appear darker.

DRAWING COMPOSITION

The drawing composition relates to the lines defining spaces or elements in an image and their relationships. Lines can give the impression of perspective, such as converging lines, or suggest relationships to other elements with overlapping or encircling lines. The drawing composition is determined by the framing used to capture the scene. The most powerful parts of the frame are the diagonals and the intersections of the diagonals at the corners of the frame. Drawing composition also relates to concepts of scale and repetition.

Nonsense "Rules" like the "Rule of Thirds" do not fully represent the ways that elements can be positioned within the frame, there are many more effective ways to use parts of the frame to achieve a satisfying result. Concepts such as balance, tension and discord all have a role to play.



Above: Two Ansel Adams images. These show the power of the drawing composition. Note the use of the "S" curve, division into sections, repetition of shapes and balance within the image.

SPATIAL COMPOSITION

The spatial composition relates to the placement of elements within the frame and their separation into individual spaces. Negative space suggests scale and emptiness, closely grouped elements suggest intimacy. The closeness of elements to the edges of the frame can also suggest openness or containment.

Many effective photographs work because each quadrant of the image contains something different, something that works with the subject and that maintains visual interest.



Above: Neuman's image of the composer Stravinsky and Caravaggio's painting of St Jerome. Both use spatial composition to great effect.

TEMPORAL COMPOSITION

The Temporal composition can suggest movement or the passage of time and emphasises our emotional or intellectual connection to the image. Images that evoke a feeling or memory have a more powerful impact on our memory than a mere "pretty picture". The use of slow shutter speeds to convey the passage of time is a way of conveying the narrative in an image.



Above: The use of a slow shutter speed (My image at left) can give a sense of movement and in the case of the Formula 1 image at right, a sense of speed and drama.

MAKING IMAGES WORK USING THE DESIGN AND COMPOSITIONAL TOOLS

PERCEPTUAL “TRICKS”

In images, warmer colours tend to project forwards and cooler colours tend to recede into the background. This perception reflects the real world where distant objects tend to look bluish because of atmospheric effects. Objects in an image with cooler colours combined with softness (lack of contrast and sharpness) are perceived as being distant – like mountains in a landscape.

Warmer colours combined with brighter and more contrasty elements appear near most in an image, so using these tools we have a number of ways to construct an image to emphasise the important elements. This way we can direct our viewer’s attention where we want it.

Humans are least sensitive to the Hue of a colour, in fact, our brains make all sorts of adjustments to our perception to take account of changing lighting conditions, so it is sometimes hard to realise that the lighting in a scene is actually warm or cool. Our cameras however are simple recording devices and faithfully record the colour temperature of a scene. Hue, or White balance can have a serious impact on our perception of a photograph

The Hue (Colour of the colours) or White balance also has a part to play in our interpretation of the scene. Cooler overall Hue has a calming effect, whilst warmer tones are more energetic. Taking the same image and changing the Hue (Colour Balance) only can have a dramatic effect on how we perceive the “Mood” in the image.



Above: The use of warmer colours and cooler colours aids in the perception of depth

HOW COMPOSITIONS WORK TOGETHER

Forms: How elements within an image relate to each other work to create an effect. They can be in the form of *Repetition*, where several similar elements are placed together to create a regular pattern. The spaces between similar elements can be as important to the composition as the objects themselves

Similar forms that are not the same but are of a similar nature can be placed together to form a **Harmonious** relationship that stems from their similarity. Use of repetition in the form of elements of different sizes can aid the impression of perspective. The placement together of elements of vastly different shape (such as a circle and a square) can create an impression of **Discord**. The degree of differences between elements, in size, shape and spacing will determine whether the elements are Repetitive, Harmonious, or Discordant.

Gradation: is the use of steps of differing tones to define areas of the image. Where the steps between tones are gradual, the effect is more Harmonious. Gradation mimics the real world, where areas of similar colour and tone tend to be separated by gradual steps, such as the sky.

Large steps in gradation tend to identify areas of drama and interest that are the opposite of natural changes. Increasing contrast in an image adds to the steps between tones and emphasises the drama in that part of the scene and draws our attention to that element of the image.

Areas of graduated tone can also be used to define or suggest the 3rd dimension, in both real objects and in two dimensional objects that have the illusion of the 3rd dimension. For example, the changes of tone over a curved surface.

The use of gradation together with repetition and scale enhances the appearance of the third dimension. Used in different ways, the image can transmit moods and feelings.

Contrast: Humans are most sensitive to changes on contrast and this is a key way in which we decipher the world and the objects within it. Areas of greater contrast attract our eyes and should identify the key elements in a composition.

Contrast in an image can be in the form of Tonal, Colour, Drawing or Spatial. Contrast between elements in whichever form gives the image energy and interest. Contrast can also be used in the form of contrasting textures between elements.

COMBINING COMPOSITIONS

A composition that utilises the above tools of expression can be combined together to achieve either **visual unity** or **confusion**. Elements within a composition can be in conflict or harmony, but the overall effect must be a unified whole, without any jarring or out of place elements that are not counterbalanced by other elements.

A composition that combines disparate elements, colours, tonal ranges and the other elements into a resolved whole is said to be in unity.

Unity can be static, as in a regular pattern of similar elements, or have dynamic unity, where there is a pattern or rhythm in the sequence of elements. The pattern of lines and shapes in the human form can be said to be dynamic, whereas the repetition of lines in architecture can be seen as statically unified.



Above: Both Tony Hewitt's images and Rembrandt's "Nightwatch" use several of the compositional tools together.

PUTTING THE TOOLS INTO PRACTICE

The compositional tools need to be applied to the construction of the image at the earliest stage of image making – the conceptual stage, where the photographer responds to an event, place or time and seeks to create an image that reflects that response.

WHAT MAKES AN IMAGE WORK ?

These are a few keys to understanding what makes a photograph:

Clarity of intent – if you have a clear idea of what you are trying to do with the image, it will translate into an image that interests others.

"There is nothing worse than a sharp image of a fuzzy concept" – Ansel Adams

Engagement – Your picture needs to be of something that is of Interest to the viewer.

Gesture or movement – actual or implied movement or a gesture captured (Cartier Bresson) will give a picture a dynamic quality that attracts your audience

Mystery – If your image has a mysterious quality, your viewer is more likely to engage and study it more

Emotion - Either implied or explicit, your viewer will relate to the situation being portrayed.

Story – If your picture tells a story that is relatable, your viewer will respond

Unique aspect – There are no new subjects, only new ways of representing existing subjects. If your picture presents something in a new or different way, it will attract the viewer.

Factual /historical detail/record – Does your picture depict a decisive factual or historical moment ?

Pictures that have that historical or newsworthy content are instantly engaging.

So, how do we go about constructing our images after the shutter has been pressed ?

THE FIVE THINGS WE CAN CHANGE IN THE IMAGE DURING PROCESSING

In processing our captured data, we seek to take the information captured by the lens and sensor and turn it into a meaningful picture. Overcoming the "*democracy of the lens*" is a key to making a meaningful image. The camera cannot discriminate between elements of interest in a scene and those of lesser importance. Everything is recorded with equal importance. Once an image (data) has been captured, it is then up to the photographer to process this data to reveal the image they conceived when pressing the shutter.

There are only 5 things that we can do in the processing of our images. Does my image (or parts of the image) need to be:

Lighter or Darker ? (Tonal Range)



Above: Left – the Nightwatch by Rembrandt and my image of the walrus, at right. Both use tonality to concentrate and direct the viewer to the important elements.

By making parts of the image lighter or darker we can direct the viewer's eye to the important elements of the composition. Our eyes respond most strongly to brightness in an image, so these elements should be the most important.

More or Less Colourful ? (Saturation / Chroma)



Above: Vermeer's painting and my landscape use saturated colours to direct the viewer.

Making parts of the image more or less saturated also act to direct the viewer. More highly saturated objects also tend to look closer to the viewer, so also aid in adding dimensionality (the 3rd dimension) to an image.

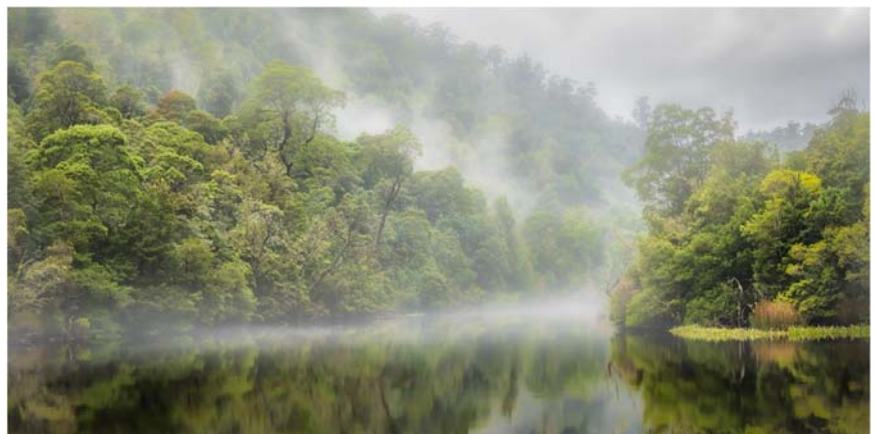
Warmer or Cooler ? (Colour Balance = Hue)



Above: at Left this landscape has a cool hue that feels cold and restful, the Rembrandt self portrait at right has a warm hue and feels more energetic and dynamic.

Making parts of an image warmer or cooler helps to set the mood for the image. Our eyes are less sensitive to hue than saturation or brightness, but the hue gives us important information that aids our understanding.

Harder or Softer ? (Contrast)



Above: At left Tony Hewitt's aerial image has high contrast (as well as high saturation) to give the image more energy and a dynamic quality. My river scene in fog has low contrast (and saturation) to give a more tranquil feeling.

High contrast areas draw the viewer's eye (we look for sharp edges to define objects) and have more energy. Softer, low contrast images are more restful and contemplative.

Sharper or Duller ? (Sharpness and Local Contrast)



Above: At left, a soft image of a flower has no sharp areas. At right, my image of the waterfall has the foreground sharp (and more contrasty and more saturated) with the background softer and less contrasty, all to aid the feeling of depth.

In an image, sharper areas appear more important (and closer to the viewer), less sharp areas (such as a distant horizon) appear less important and further away.

By applying these processing options to all or part of an image, the hidden elements within the image can be revealed, the "*Image within the image*".

When applying the processing to our image file, we need to remember that the most important parts of the image ought to be the brightest, most colourful and with the highest contrast and sharpness. This tells our viewer "*This is what is important*" in the picture.

CONCLUSION

Understanding the language of pictures allows the viewer to interpret the messages that the photographer has included within the image, just like being able to read and understand the deeper meanings contained in a book or poem. These skills are not inherent, they need to be learned and put into practice so that we can utilise them in appreciating and evaluating the images we see every day.

FINALLY, SOME REVEVANT QUOTES

"It's one thing to make a picture of what a person looks like, it's another thing to make a portrait of who they are." **Paul Caponigro**

"There are always two people in every picture: the photographer and the viewer." **Ansel Adams**

"You don't take a photograph, you make it." **Ansel Adams**

"Great photography is about depth of feeling, not depth of field." **Peter Adams**