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Wallscapes in the Urban Environment

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Look around you and the world is filled with structure. These structures are from nature, human made, physical realities but also cultural.

Generally these structures create barriers or walls, visually and to our physical movement. These walls give us a sense of place, of space, helping to decide our movements and generally helping define how we 'feel' while we are going and when we get there.

Through history there have always been 'walls', from the natural elements and early villages through to our modern city scapes. Humans have generally made use of their walls, from early drawings on cave walls to building decoration to create style and uniqueness to the use of pure colour to heighten and brighten.

But how well do we really understand our 'walls'. What affect do they have on us? How do they define our sense of where we are and where we are going?

And with the knowledge we do have, do we take the time to create wallscape which is interesting, bright or harmonious? Or is it more dull, continuous, plain, confusing.

Understanding how wallscape affects us and why it is important. Understanding the elements that will enable us to create interesting surroundings in our world is also very important.

In the following chapters these issues will be examined, hopefully constructing a sense of understanding about our walls and how it is possible to design wallscape which will brighten our lives and help us enjoy our world to its fullest potential.
SECTION ONE
Walls come in a variety of shapes and sizes and many differing types. Some of these might include:

1. Physical Walls

2. Economic Walls

3. Psychological Walls

4. Urban Walls

5. Rural Walls

6. Cultural Walls
These are some of the types of 'walls' or barriers that make up our worlds. Some are easily understood and comfortable and some are difficult and cause us discomfort.

In this way we can look more specifically now, at the 'walls' of our urban worlds. Some of our urban walls are easily understood and comfortable while some make us sense and cause a feeling of discomfort.

But it is important to have some sense of just how the physical and mental processes of perception function. How do we see what is around us?
how do we see

People understand those things around themselves in different ways. Different cultures learn as children to screen out types of information and yet pay close attention to another; some associations becoming more important. Through our senses and culture our associations to people and the elements around us develop.

While it has generally been accepted that our language or social conditioning is learned through association and over time, only more recently has it been understood that what we visually see is also a learned phenomena.

A synthesis of what we 'see' takes place just as it does for our other senses, i.e. language and understanding. We learn while we see and what we see influences what we learn.

The older widespread idea has been that a stable and uniform 'reality' is recorded on a passive visual receptor. The idea that what we see, is the same for each person and can therefore be used as a 'universal reference point'.

Recent research has looked more closely at this generally accepted idea. Within a specific culture there are elements generally accepted by all, but people's perception of those accepted elements may still differ. An example of this might be the differing descriptions two persons give after 'seeing' a crime take place. The sequence of how it happened as well as a description of those persons involved may differ greatly. What two people were able to 'see' in the same situation was different. The difference in each person's visual field (the image recorded on the retina) and the visual world (the image we perceive we see; it may be a sense of cultural conditioning of what to expect in a certain situation) has differed.

Even as the senses differed in the above general example, our perception of the space and those elements that help create it (the walls) can differ as well.

SOME HISTORY

This sense of trying to understand what we 'see' is not new and some good examples exist in art and literature.

In the early eighteenth century Bishop Berkeley theorized on vision. These theories have become the basis for much of the modern understanding of vision.

Berkeley believed that humans judged distance as a consequence of the interrelations of the senses; sight, touch, smell and with past experience. He believed that our senses become trained over time. Initially we only see light and colours and figures, only hear a
mixture of sounds. Through experience our senses associate certain images with certain sounds. While we do not initially hear a 'car' we become to hear sounds that are visually associated with a 'car'.

Piaget much later stated that there is relationship of the body to vision and that spatial concepts are internalised action. Psychologist James Gibson pointed out that there is an interplay between vision and body knowledge that was not recognised by Berkeley. An example is the fact that the visual field expands as you move towards an object and then contracts as you move away; the movement of the body interacts with the visual interpretation. Hearing, smell, touch may also provide extra information.

In this way our sense of vision is not passive but active; and interaction between the human physical senses, their experience and the environment.

James Gibson in his 'Perception of the Visual World' has analysed and then described a system of components or 'stimulus variables' which when combined, provide information humans need in order to move around effectively in their world.

He acknowledged in conjunction with these 'variables' that:

1. There is no such thing as spacial perception without a continuous background surface.

2. Perception depends on memory or past stimulation.

He then identifies 13 variables of perspective; visual impressions which accompany the perceptions of depth over a continuous surface and a sense of depth at a contour. These are the basic structural categories of experience into which our specific varieties of vision fit.
VARIETIES OF PERSPECTIVE

Gibson's varieties of perspective fall into three main categories:

A. PERSPECTIVE OF POSITION:

1. TEXTURE PERSPECTIVE: This is the gradual increase in density of a surface's texture as it recedes into the distance.

2. SIZE PERSPECTIVE: As objects move farther away they decrease in size.

3. LINEAR PERSPECTIVE: Lines receding into the distance join at a single vanishing point; best illustrated by railway tracks which seem to meet on the horizon. Renaissance art is credited for discovering this form of perspective.

B. PERSPECTIVES OF PARALLAX

4. BINOCULAR PERSPECTIVE: Each eye has its own image when functioning on its own, together the two eyes create another image. This is more apparent at close distances.

5. MOTION PERSPECTIVE: As we move forward, the closer we get to a moving object, the faster it appears to move. As well, objects which move at uniform speeds appear to be moving more slowly the further the distance is.

C. PERSPECTIVES INDEPENDANT OF THE POSITION OR MOTION OF THE OBSERVER

6. AERIAL PERSPECTIVE: This is the 'sense' of distance of an object depending on the quality of the air. Increased haziness creates changes in colour which may give an incorrect sense of distance. Mountains seen in very clear air look much closer than they really are.

7. PERSPECTIVE OF BLUR: Objects viewed in a visual plane other than the one on which the eyes are specifically focused will be seen less distinct or blurred, i.e. focus on a close object and the background is blurred.

8. RELATIVE UPWARD LOCATION IN THE VISUAL FIELD: We look down at close objects and up at objects that are further away. The higher off the ground, the more pronounced this effect is.

9. SHIFT OF TEXTURE OR LINEAR SPACING: A background seen over a sharp edge is perceived as more distant due to edge line and difference in the two differing textures.
10. **SHIFT IN THE AMOUNT OF DOUBLE IMAGERY:** Looking at a distant point, everything between the viewer and the distant point is seen as double. Close to the viewer and the doubling gets greater, the further the point and the doubling lessens.

11. **SHIFT IN THE RATE OF MOTION:** Judging the rate of motion of objects is a dependable and constant way of sensing depth. Close objects move more and quicker than distant objects (see point 5).

12. **COMPLETENESS OR CONTINUITY OF OUTLINE:** The manner in which one object obscures or eclipses another will determine which one is behind the other. If one object sits forward of another the outline continuity is broken and a sense of distance can be established.

13. **TRANSITIONS BETWEEN LIGHT AND SHADE:** An abrupt shift in brightness, like an abrupt shift in texture (point 9) is interpreted as an edge. Gradual transitions in brightness are perceived as roundness or gradual inclining of a surface.

Gibson has undertaken to categorise the ways in which we 'see'. There is also the understanding of what is seen or recorded on the retina (visual field) and what we perceive as seeing (visual world). As well, our culture and what we have learned as children within that culture is important. Our sense of space and those objects which help define that space (the walls) are subject to these perspectives and understandings.
our walls in space

HORIZONTAL VS VERTICAL

Within their surroundings people generally view their world and get their sense of space from the horizontal or ground plane. We tend to see the floor or ground rather than the boundaries of the floor.

This may be more easily understood when thought of in terms of the way our eyes are located. They sit on a horizontal plane. We subsequently find it easier to move our eyes horizontally. The horizontal lines allow repose. The vertical creates stress, or excitement, because it interrupts the repose. Our eyes relax with the horizontal (repose) and work harder with the vertical.

While we are more likely to be looking at the horizontal aspects or the ground plane, it is the boundaries or walls that actually create and distinguish individual spaces. Although the sense of the horizontal plane gives us the feeling of the largeness or intimate nature of a space, it is the vertical plane that creates the perimeters to that space. The vertical 'walls' stop, break up, edge, modify the horizontal ground plane. Each time this happens we have a new 'space' to be in and to 'feel' something in.

The vertical plane or walls occur wherever we are, in both the Rural and Urban worlds.
While we never think of our Rural world as having walls, the vertical elements serve very much the same purpose as those in the urban world. Natural and human built objects define the different spacial areas. We 'see' the horizontal even stronger in the rural setting but the vertical walls still define the horizontal, our perspective, and the scale of the setting.

Even in the flattest places a vertical element exists. On the sea where the horizontal panorama is absolutely flat, the vertical element still exists. The sky becomes the vertical element.
So too in the urban world the vertical elements break and edge the horizontal groundplane. The horizontal is not so easily distinguished within the urban setting though. The vertical wallscape is generally much stronger than any horizontal element due to the built up nature of our cities.

This strong vertical wallness is even more apparent in the modern city. The old world city usually includes a variety of open space. Street corridors open onto Squares or Parks.

In the modern world city the sense of space is within the corridors themselves.
SECTION TWO
Wall decoration

EARLY HISTORY

The use of our walls in a 'decorative manner' is not a new phenomena. Use of colour in the wallscapes has ranged from the caveman through to modern day. These images that decorated the cave walls portrayed the struggle of survival. The use of colours enhance the painted forms and also represented potent and magical meanings to these people, meanings which were vital to their survival. Cave dwellings at Lascaux and Altamur, France divulge a craving for colour, the polychromatic colours were completely acceptable to these people. The use of colour in these caves is often much more striking than the figurative design.

Use of colour is thought to have been loaded with symbolic meaning in earlier civilisations and cultural periods. Colour images were often related to spiritual powers and protection from nature.

The use of colour occurs in almost all the remaining primitive and ancient cultures of the earth. For all of them the use of similar saturated hues are used, i.e. red, yellow, green, blue, black, white, and gold and silver as well. Some research has suggested that these primary colours are actually related psychologically to primary emotions. This might help to further explain their symbolic use.

The use of symbolic colour in wall decoration is linked to main areas of religion, astrology, mythology, compass points, ceremony, healing and to a show of social status.

Egyptian sense of colour was highly developed. Colour was applied to their buildings in a manner which revealed the unique quality of different hues and accented architectural detail. This sense of colour was lively and ranged from the delicate to the more violent contrasting tones. This sense of colour becomes an important factor in another aspect of their cultural wall decoration; hieroglyphics.

The Greek use of colour was more evolved than their earlier counterparts. Walking along a Greek street could be a very colourful experience. Most homes and temples were painted in symbolic or cosmetic colours, usually in white, blue, red, or yellow tones. This sense of 'colour' was based on the belief that the more natural colours of wood, marble, ivory or bronze were not a substitute for artistic creation even of a whole city.
The sense and use of environmental colouring was also carried on by the Romans. Their sense of colour was wider and clearer than the Greeks and was expressed in a variety of materials including coloured paint, marble, gold, bronze and mosaics.

The influence of the Romans was wide and long term. Medieval architecture also reflects rich colouration from paint, gilding, and stained glass based on these earlier periods. The best known example of architecture from this period, which is in the Gothic style is Notre Dame. Few people realise that it was also once coloured. The outside was more vivid than the inside, with bright reds, greens, orange, yellow ochre, blacks and whites, but with little or no blue. The known evidence points to the wide use of these colours on built forms in the 13th-15th century.

Such vivid and what might be considered grotesque use of colour, in a period of history which is not known for being particularly innovative is questionable. But it may have been purely a reaction to the 'greyness' of that time period.

Looking at history in this way, with an eye to the 'decoration' of the wallscape begins to reveal a much less known side of the past. We may question that if colour was so extensively used in earlier periods, why does the present period lack this sense of colour?

In very simple terms, our present attitudes represent an idealised conception of the past. Classical Greek architecture has always represented a source of inspiration for architectural purity and perfection. The Parthenon is seen as a perfect symbol of freedom and democratic process, with a similarity of structure being repeated in most of our modern cities. Therefore when Alma Tadema depicted the Elgin marble frieze as
coloured in his painting 'Phidias and the Parthenon' in 1868, it caused a minor uproar.

The natural weathering and type of pigment used in earlier periods has resulted in a great lack of understanding generally about the physical appearance of other time periods. Only with the discovery of specific parts of the past, i.e. painted caves; Altamira 1863, 1879 or the unearthing of the past; Egyptian tombs, Tutankhamen's 1922, or the unearthing of Pompeii, has the realisation of just how vivid and colourful earlier civilisations were.

With this understanding, it is easier to rationalise more recent attitudes and design philosophies that have cautioned and conditioned against the use of colour in the external elements of our urban worlds.

THE MODERN PERIOD

While it may seem that even with a growing awareness of the past periods, with their bright and garish embellishment, that little has changed. This is not necessarily so. A growing understanding of colour use on built form has been occurring at different periods within this century.

In the 1920's a simultaneous development of the theories of Constructivism in Russia and De Stuhl in Holland, brought about a close relationship and understanding between painting, sculpture and architecture. Painters were becoming involved in the design of purely volumetric forms. With Mondrian's form of Abstractism at this period, architectural colour or lack of it was no longer only viewed as decorative, but helped to define space.

The period of the Bauhaus in Germany in the late 1920's saw the introduction of functionalism as a basis for design. But along with it the principles of colour use and colour psychology were introduced.

Into the 1960's and a sudden mass swing to colours occurred. This can be judged as a reaction against the greyness of the late post war 1940's and 1950's.
Even for this greyness, the art of Billboards had grown tremendously from the turn of the century. This was not only true of America but also places like Russia and China as well.

With this re-appearance of colour, the strict sense of 'painting' and 'sculpture' began to blur. These mass culture objects became a form of sculpture as well as painted objects. This 'new' sense of colour began making its appearance in the form of large murals and supergraphics. While traffic signs and billboards were very specific in their presentation, the murals and graphics were the complete opposite, presenting large splashes of abstract colour to its audiences. This new sense of largesse heralded 'art' leaving the studio-gallery and moving onto the streets. The need to rescue and enhance the grey urban walls, re-establishing sense of community had begun.
Since its introduction in the early 1960's, this movement to re-dress our wallscapes, has not ceased but is growing stronger. Where contrasting abstract splashes of colour were once the main format, the use of humour, satire or practicality create a much more harmonious aspect to our more recent wallscapes (see New Zealand examples).

The humorous or satirical coverings of our wallscapes can take many forms. Some of the more unusual 'coverings' of our wallscapes has been by a person named Cristo. He has created a great deal of controversy in his creation of walls; 'Running Fence' and by covering existing walls in coloured materials. His latest venture was to cover an entire bridge in pink fabric. A vibrant addition of colour to a historic structure.

Another form of wall decoration also often causing public outcry is 'Graffiti'. While graffiti is condemned by some parts of society, it can often provide humour or strong comment on topical issues.
The use of 'Bombing' is an even more refined or well dressed version of graffitti. While its beginnings were not here, having its basic origins on the subway trains of New York, it has become highly perfected in New Zealand. Initially providing a social comment, it has gone on to having a commercial acceptance in advertising on some levels.

GLASS

Holes in the real walls? Our sense of direction has taken an even more reflective direction recently. That is many modern buildings are being covered in 'reflective' glass. Originally the innovation of this attracted great attention. So much that now the originality has been diminished by endless repetitions of just another glass box.

The original idea was a good one and proper use of darkened glass or reflective mirrored glass can work well. But poor application to where and how it is used seems to result in the scorn now held by much of the public for the impersonal facades represented by these buildings.

Superficially this use of colour and image may only be seen as 'decoration' and referred generally to as 'murals'. But seen in greater depth, the use of colour and images whether abstract or more practical, symbolises a period of employing colourful images to celebrate our wallscapes and structures. A rejection of the drab and derelict urban environments of the past. Colour and decoration once a prominent feature of the walls again has that role to play.
To understand and make use of our wallscapes it is first necessary to understand that in any setting, the images that humans perceive are very involved and complex.

A large variety of elements are combined within a setting and help make up the differing wallscapes that we pass through in our daily movements.

These elements when used together well, provide a unity within a setting. Used poorly, they result in a sense of disunity.
Light is the very basis of our visual world. Without light there would be no sense of colour, texture, .... 'Natural light' either daylight or moonlight originates from the sun. 'Artificial light' has an artificial source - usually electric.

Our interest in light here deals almost wholly with reflected light from pigmented surfaces, either self coloured or painted.

**Light Spectrums:**

Diffused sunlight is the accepted standard of 'white' or 'natural' light. This light occupies only a small part of the radiation band. Below this visual 'light' band are the ultra violet rays and above are the infra reds.

This 'white' light contains all the colours of the rainbow caused by a refraction of sunlight passing through moisture in the atmosphere.

The splitting of this white light can be seen in the sky. At early dawn and dusk, when atmospheric interferences is at a maximum, the red and yellow rays are reflected. When the sun is high at midday, there is little or no atmospheric interference with a strong blue (sky) spectrum being reflected.

This happens in natural and painted surfaces as well. These pigmented surfaces absorb some of the light and reflect the rest. If the light is white, a yellow surface will absorb the blue part of the white light and reflects green and red which are perceived by the eye as yellow. A pure white surface reflects all the light that falls on it. A pure black surface reflects nothing.

In different periods of the year a variation of natural light is available. As the amount of light varies the colour of a surface also varies due to the differing amount of light being reflected. Generally summer represents the period of strongest light with spring/autumn medium and winter as the period with the softest light.

Periods of the day also reflect different light intensities. Dawn and dusk is soft while middle of the day is strong and bright.
Artificial light sources seldom contain the balance of colour that natural light contains.

Some of the more common types are:

1. **TUNGSTEN FILAMENT LAMP BULBS**: Our most common artificial light source, the common 'light bulb', tend towards the orange end of the spectrum. Surfaces that appear blue in daylight look weaker or more grey under the bulb. Psychologically it is a comfortable light though.

2. **FLOURESCENT TUBES**: Some tend towards blue giving red surfaces a dull appearance and blue and green surfaces stronger colour. Others tend toward yellow making bluer appear grey while orange and yellow surfaced areas are stronger and deeper. Neither of these are particularly satisfactory on their own but are psychologically more acceptable when used together.

3. **MERCURY AND SODIUM DISCHARGE LAMPS**: These are most common for road and open space illumination in urban areas. These are more relevant to night time wall illumination.

'Sodium lamps' usually used to light large buildings and walls produce a strong yellow light which also tends to distort colours, i.e. reds look muddy-brown.

'Mercury lamps' are inclined to blue green and considerably distort most colours including the human complexion.

'Sodium lamps' usually used to light large buildings and walls produce a strong yellow light which also tends to distort colours, i.e. reds look muddy-brown.

Therefore 'light' is the key factor that enables our eyes to receive visual images. As our eyes receive signals, our perception of those received signals/images are based on colour. The quality of light affects those colour images and the feelings we get from those colours.
COLOUR

Visible light and colours affect all things. The colours we perceive around us has conscious and sub-conscious effects on our state of mind and well being. All colour and colour combination have a more or less stimulating effect. A colour grouping is generally related to environments or objects such as a forest setting or an English Village or a post box or paving bricks. These have general characteristics that a viewer responds to. When a colour differs from its normal aspect surprise is usually the result, i.e. a pink forest or purple paving bricks.

If understood, colour can be used to create feelings within people. Using colours that harmonize and blend together well and people respond with feelings of unity, security, relaxation. Use of colours that contrast or that are opposites creates feelings of excitement or interest. Use of colours poorly that contrast and conflict results with feelings of visual chaos, psychological disruption and confusion.

What is Colour?

Colour is the result of light that humans are able to perceive within the visible spectrum.

Colour is made up of different elements. These are:

Hue - A colours hue is what we call its 'colour'. If its hue is red, we say it is a red colour. If its hue is blue we say a blue colour.

Tone - The Tone or Value is the relative lightness or darkness of a hue. If it is a light hue it reflects a greater amount of light than a dark hue. A very light blue tonally reflects more light and is 'brighter' than a dark blue.

Intensity - The hue or colours intensity ranges from neutral grey to the purest and strongest version of the colour. A light red contains more grey and is lighter and less intense than a very pure red.
The different hues or colours are arranged on a wheel and/or a triangle.
Initially there are three primary or first order colours. These are the colours that can not be made by mixing other colours - all other colours come from these initial three.

By mixing the three primary or first order colours we get secondary colours or second order so, first order - 2nd order.

These second order colours appear between the two colours they are mixed from.

By mixing a first order colour with a second order colour we get a Chromatic Step of colour.

These colours also appear between the two colours they are mixed from.

By mixing second order colours together we get a third order of colour.
Seen on a colour triangle, these third order colours appear between the two second order colours they are made from.

Looking at the colour circle it is easy to determine colours that are:

1. Harmonious
2. Complementary/Contrasting
3. Complementary/Contrasting triads

1. Harmonious

These are colours that when used together create a sense of harmony. On the colour wheel these colours are located close together. Picking one colour, the two tones next to it create a feeling or sense of harmony due to the intensity of colour blending well to the eye, i.e. violet with blue-violet and red-violet create a harmonious match.

2. Complementary/Contrasting

These colours also present a sense of balance and harmony to the eye and are complementary although giving strong contrasts to each other. On the colour circle these complementary contrasting colours are located diametrically opposite from each other, i.e. yellow/violet or green/red.
When used in correct relation to each other these colours provide a perfect visual balance. This balance occurs when neither colour appears more prominent than the other.

The following diagrams show the area ratios necessary for good colour balance to the eye.

1:1 1:2 1:3
R G O B Y Y

These ratio’s of colour are only usable if the colours are purely unadulterated; an unrealistic possibility in the real world. But it is still possible to use these ratios as general guidelines.

3. Complementary/Contrasting Triads

These are also found by looking across the circle for a complementary colour but then choosing the two colours either side of the original complementary colour. In the case of red, either side of its complementary green are blue-green and yellow-green. The triad of red, blue-green and yellow green is established.

These triads provide contrast of colour but because the amount of light reflected is similar from each colour the eye sees the 'contrast' as harmonious. By rotating this triangle around the circle, twelve colour triads can be identified.
SIZE CONTRAST

Size contrast is use of the Complementary/Contrasting colours and colour triads. But instead of them in ratios that are harmonious to the eyes, the ratios are distorted. This is done to create a much stronger contrast than normal. If chosen carefully this contrast can give a strong sense of interest or excitement to an object or area. Colours chosen poorly result in visual chaos and perceptions of distortion, even boredom.

BRIGHTNESS CONTRAST

The most extreme contrasts of brightness and dark are those of pure black and white. In the colour world it is the reflectivity of light rays that give a range of light to dark contrasts.

In photography a picture with a ratio of one third dark to two thirds light is accepted by the eye as normal. A ratio of half dark to half light is seen as dark and two thirds dark to one third light is very dark.

Although it is subjective assessment used for judgement, these ratios can be applied in our everyday world. A wall painted in a very dark colour, i.e. two thirds dark with one third light trim will be a dark building and give off a feeling of heaviness. A wall with a ratio one third dark to two thirds light will be more in balance, feeling 'light'.

These feelings given off by the light and dark contrasts are of course dependant on light sources and intensity of the light on the wall. This brightness/darkness contrast is related also to a sense of warmth/coolness of the colours chosen. It may also be useful when judging the sense of solid/void within a particular wallscape.
COLD/WARM CONTRASTS

The experience of warm and cold colours are somewhat odd, giving a physical sensation to something that generally is not acknowledged as having a temperature differentiation when touched. Although scientific experimentation with colour has shown that body temperature can vary by several degrees in differing coloured rooms; cool blue-green slows blood circulation and lowers temperature while orange-red stimulates circulation and raises temperature.

Colours lying on the left hand side of the colour circle are generally characterised as 'cold', while those on the right are seen as 'warm'. Those two colours caught in the middle, i.e. yellow and violet, will have a warm/cold effect depending on whether joined with a warm or cool colour.

If colours from one side only are chosen for a composition, i.e. the warm right side, then the composition will have a decidedly warm feeling to it. Even with this use of purely 'warm' colours, it is still possible to have some warm/cool colour contrast, as some of these warm colours tend more towards the 'cool' end of the spectrum, i.e. red-violet and violet.

Even a shadow or change of light type may accentuate a warmer or cooler feeling to the original colour. Light during different seasons or different daytime periods may have this effect on colour.

This sense of 'warm' and 'cool' also has an effect on our spacial perception. The 'warm' colours tend to stand forward to the eye, while the cool colours recede. This is again due to the tonal, reflectivity of the colours. 'Warm' colours tend to reflect more light with the eyes receiving a sharper image or message. Dark or cool colours reflect less light with the eyes receiving less light and a softer less sharp image.

LIGHT AND SHADOW

A change of light type or shadow patterns can accentuate a warmer or cooler feeling to the original colour. Colour placed on a building should be only done with an understanding of the light changes that occur. This is both in the day and at night.

Light during different seasons will also give differing shade patterns as well as changing the feeling of the colours chosen.
In our wallscapes then, it is possible through the use of colour to help suggest and create feelings of a wall or within a space.

Some generally accepted colour responses are:

**Red**
- the most dominant and dynamic of the colour spectrum.
- psychologically exciting increasing restlessness and nervous tension.
- red is most pronounced under strong light intensity (it is the first of all colours to fade out in dim illumination).
- brilliant red commands human attention - it helps distract attention from within and direct it outward.
- variations of red are preferred by extroverts, it bolsters human moods and counters melancholia.
- tonal variations of red including rose, maroon, pink, while still expressive are more universally appealing while still reflecting deep emotion.

**Orange**
- similar qualities to red but more mellow and less primary.
- not generally preferred in its purest form but very pleasing in its various tones such as peach, salmon and browns. These have a more 'livable' charm. Orange and its assorted tones and intensities cast cheerful and flattering glows.

**Yellow**
- This hue is sharply focused by the eye and is also felt as cheerful and incondescent in appearance. Because of its high viability and brightness it is well used in conditions of dim illumination, or large spaces or to give sharp contrast.

**Greens**
- Psychologically green and blue greens represents a withdrawal from stimulus, providing ideal environments for sedentary tasks, concentration and meditation. Bluish-greens lack a primitive quality and are both pleasing and livable.

**Blue**
- Blue is the opposite of red increasing restfulness and decreasing nervous tension. Blue is visually primary. It has a naturally high light saturation and low reflectivity, and is therefore harder to focus on. It is associated with dim light, restfulness and sedateness and is used in many forms - light, dark, pure, greyish. Pale blue seems to bother human eyes and give a blurred appearance to adjacent objects. If used in large areas it can tend to give feelings of bleakness.

**Purple, Grey, White, Black**
- Purple is not suitable for large areas as it disturbs the focus of the eyes.
- White is a perfectly balanced colour, clear and natural. It reflects all light cast upon it and gives a very sharp image to the eye.
- Black is totally non-reflective and can be negative and heavy in large areas.
- Grey is generally passive.
1. Effects of Hue

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<tr>
<td></td>
<td>Bright orange</td>
<td></td>
</tr>
<tr>
<td>Stimulating</td>
<td>Red</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Orange</td>
<td></td>
</tr>
<tr>
<td>Cheering</td>
<td>Light orange</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warm grey</td>
<td></td>
</tr>
<tr>
<td>Neutralizing</td>
<td>Grey</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>White/off-white</td>
<td></td>
</tr>
<tr>
<td>Retiring</td>
<td>Cool grey</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Light green</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Light blue</td>
<td></td>
</tr>
<tr>
<td>Relaxing</td>
<td>Blue</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>Subduing</td>
<td>Purple</td>
<td>Moderate</td>
</tr>
<tr>
<td>Depressing</td>
<td>Black</td>
<td>Low</td>
</tr>
</tbody>
</table>

2. Brightness, Colour Saturation and Illumination Level Effects on the Perception of Volume

<table>
<thead>
<tr>
<th>VOLUME (ROOMINESS)</th>
<th>BRIGHTNESS</th>
<th>COLOUR SATURATION</th>
<th>ILLUMINATION LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enlarge</td>
<td>Areas will be enlarged by lightness and small patterns (use to alleviate feelings of oppression or 'closed-in').</td>
<td>Pale or desaturated colours 'recede'. In situations where equipment projects into a room and tends to make it appear smaller than it actually is, paint the projections the same colour as the ceiling or wall — a very light shade — to make them appear to recede into wall or ceiling.</td>
<td>High</td>
</tr>
<tr>
<td>Close-in</td>
<td>Areas will be closed-in by darkness and large patterns.</td>
<td>Dark or saturated hues 'protrude'.</td>
<td>Low</td>
</tr>
</tbody>
</table>
3. Colour Effects on Perception of Time, Size, Weight and Volume

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>PERCEPTION OF TIME</th>
<th>SIZE</th>
<th>WEIGHT</th>
<th>VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Warm'</td>
<td>Time is over-estimated; use warm</td>
<td>Things</td>
<td>Weights</td>
<td>Decreases</td>
</tr>
<tr>
<td></td>
<td>estimated; use warm colours for</td>
<td>seem</td>
<td>seem</td>
<td>apparent</td>
</tr>
<tr>
<td></td>
<td>areas where time in apparent 'slow</td>
<td>longer</td>
<td>heavier.</td>
<td>size of</td>
</tr>
<tr>
<td></td>
<td>motion' might be more pleasureable</td>
<td>and</td>
<td></td>
<td>rooms.</td>
</tr>
<tr>
<td></td>
<td>(eating, recreation).</td>
<td>bigger.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'Cool'</td>
<td>Time is underestimated; use cool</td>
<td>Things</td>
<td>Weights</td>
<td>Increases</td>
</tr>
<tr>
<td></td>
<td>estimated; use cool colours for</td>
<td>seem</td>
<td>seem</td>
<td>apparent</td>
</tr>
<tr>
<td></td>
<td>areas where routine or monotonous</td>
<td>shorter</td>
<td>lighter.</td>
<td>size of</td>
</tr>
<tr>
<td></td>
<td>tasks are performed.</td>
<td>and</td>
<td></td>
<td>rooms.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>smaller.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Colour Summary**

These two elements, light and then colour are the 'key' elements to what we see. Without light we would not see. Without colour much of what we do see would lose a great deal of its depth and its feeling. The human species is one of only a very few species on earth that have colour perception. A world of black and white would be vastly different.

The other elements that follow, are important elements but they work in conjunction with light; its quality and purity; its reflective intensity giving colour.
Light and colour given form and shape to all visual aspects around us. These forms and shapes are normally seen as three planes. These are the ground or floor plane (horizontal), the wall plane (vertical), and the overhead plane. Within the urban setting these enclose us: the ground or floor, the walls and the roof or sky.

These three: ground, wall, sky form a hierarchy. For most people the ground plane is most important. The ground or floor spreads out until it reaches obstacles (walls) and 'space' is formed.

Then there is the wall plane. The walls are not often focused on as clearly as the floor but the walls fill a very important function. They provide containment to the 'space'. Without this containment the sense of 'space' turns to emptiness or vastness.

Lastly, there is the roof or sky plane. It is generally taken for granted and is always there. But if this 'roof' is close enough, such as set within a wall, i.e. a veranda it provides a sense of enclosure. Something humans relate to and feel comfortable with very quickly.
FORM AND SHAPE

There are recognizable geometric shapes within walls and buildings.

These can also be seen in their overall arrangement.

Repetition or variation of particular forms provide strong elements of wall composition. Repetition of a specific element or matching shapes may provide a special characteristic to the wall or used widely may help an entire area tie together. As well these elements can contribute to the overall proportion or provide a visual cue to direction (see Proportion and Direction).

UNITY THROUGH REPETITION.

REPETITION CREATES "SENSE OF PLACE"
PROPORTION

The evidence of the past points to a much greater concern with proportional relationships. Classical and Gothic architecture with their much greater detail made much more use of geometric relationships to achieve proportional balance.

While there would seem to be less emphasis put on proportion in the modern world it would seem there needs to be even greater attention to proportional detail with the use of fewer elements.

SOLID AND VOID

The phenomena of solid materials and the voids in windows or other openings is very much a compositional and traditional component of arch. This use of solid and void and their proportional arrangements are the very essence to helping create our wallscape. The 'old' world contained a great deal of solid with some void. The 'new' world contains a great deal of void with some solid. Looking back at brightness contrast in the colour section - different photographs with different dark to light ratios give different feelings. These ratios can also apply to our wallscape.

TEXTURE

Textures come in ranges from very rough to very smooth. While we usually think of texture in a small setting, within a larger setting an individual or group of walls may provide an interesting textural dimension when viewed from a distance.

Used with a specific colour, textures can have modifying effects. A smooth surface will lighten or reflect a truer sense of colour than a rough surface which dulls or darkens a colour. This is due to the differing surfaces' ability to reflect the light they receive. Smooth surfaces reflect better with a colour appearing in its best form. Rough surfaces break up the reflected rays with a colour appearing darker or duller.

As well, surfaces with roughness tend to be seen and mentally accessed as having a sense of permanence, while smooth surfaces feel light, less enduring.
The concept of 'scale' when related to human beings usually acknowledges that people respond more positively to objects and spaces which reflect dimensional aspects within the human 'aura'. This sense of 'aura' is the area both visually and psychologically that a person is able to easily understand. This is directly connected to the 'eye level'. Our eye level is the point from which the world is 'visually' perceived. The world is generally built to the perception of the 'adult' eye level. From a small child's point of view much of what is around them or above them, is the wrong size or out of place. Therefore when we move outside that area of the aura, especially in the vertical sense, we say 'it is not in human scale'. As buildings have become taller this sense of 'human scale' has virtually been lost in many urban centres.

This sense of 'human scale' then, lends itself particularly to a vertical element of about 12 feet. Above this begins to be outside the human aura. Humans very regularly choose the enclosing element which is closest to this vertical element. (Use of methods such as cloisters, or verandas, (especially in New Zealand), have historically provided for this need for enclosure. Brad Davis' study (in Appendix 1) begins to show through scientific observation, the frequency with which humans choose this sense of close enclosure.

Within a larger setting we also feel this sense of enclosure or lack of it. This may be in our squares or streets.

The different ratios of vertical to horizontal planes have been studied and can be easily understood. Jim McCluskey is able to portray them in a very useful manner, that can be related directly to people and their feelings with various urban settings.
Height width ratio is crucial to determine the enclosing elements in an outdoor space. There is a great sense of vastness or 'space'. The little or no sense of enclosure is created by the immediate wall only.

The perimeter of the space is only part of the greater whole. A great proportion of the view is taken up by the immediate foreground and the sky.

Containing elements are clearly seen while detail is still fuzzy. A sense of place is produced while a sense of containment is relatively low.

The entire elevation and its details are clearly seen from the opposite side of the spaces almost filling the entire field of vision.

This is a good balance of horizontal and vertical and is a comfortable space to be in. A strong sense of enclosure is experienced.

The sense of enclosure is very strong and can be overpowering. About half of the opposite wall is in full view.
FACADES

Understanding how scale affects humans is very important; what size vertical elements create which feelings. Realisation only helps highlight another aspect of losing our older vertical walls. A great many of these facades were within the 'human' scale. Re-use of these is more important than for just their historic element. Re-use is very common in some countries such as England. This practice is beginning to receive greater attention in New Zealand as well.

The Vivian/Willis building, stillborn on its tracing paper. Athfield's approach to the high-rise commercial building is to humanise its roots and play with its stalk, pre-requisites towards a thorough investigation into the joyful potential of the commercial workplace.

The retention of older facades or the creation of new ones in older styles can be very beneficial. Visually, retention of an older facade will help to retain a specific style and feeling in an older area. This can often be financially rewarding as well. In the Cotswold villages England, new structures are built in the traditional stone, in traditional styles. These new structures blend in quickly creating no sense of disillusionment for the tourist industry or their money.
DIRECTION

In most walls, many of the elements of colour, form, proportion, solid and void and scale often help suggest direction. Low horizontal elements may guide the eye towards a specific point. High vertical elements may also do the same. The sense of perspective presented by these planes both attracts the eye and creates a sense of direction as we move from point A to B.

The different vertical planes that our walls represent form our spacial experiences as we pass between them. The layout of these vertical elements become important in creating the type of spacial experiences had. Of course styles and materials also contribute greatly to the experience, but the layout of the vertical elements and their scale form the initial basis.
Jim McCluskey in 'Road and Townscape' suggests:

**Y-Junctions**

* Choice of Alternatives
* Invites Exploitation

**T-Junctions**

* Gives Alternative
* Does not Invite Exploitation

**Multiple Views**

* Simultaneous Comparing of two spaces character
* Choice of Alternatives
* One choice provides mystery, the other is more straightforward
Angles
* Sense of mystery – invites exploration

Curves
* Draws the viewer around
  * Sense of mystery

Deviation
* Creates distinct space
  * Slows movement
Deflection

- Slight to drastic direction change

Level Change

- Alternative choice
- Movement from one space into another

Funneling

- Gradual containment of space
- Viewed from the wide end (A), the distance will appear longer than normal
- Viewed from the narrow end (B), the distance will appear shorter than normal
**Widening**

* Movement from narrow to open
* Sense of release

**Constriction**

* Constriction builds up sense of release before open space

**Enticement**

* Distant feature (i.e. Church) unattainable
* Enticement to find route to feature
* Feature draws attention/discovery

* The eye is drawn into the distance
* Often used in urban/rural boundaries.
STYLE

In earlier times the 'style' of buildings were very similar, and therefore wallscape were also similar. The availability of materials and the building technology was more limited than in today's modern world.

In the 'modern' world the range of building materials and construction methods allows a designer an immense range to choose from. This can include elements and styles from other eras through to the 'modern' period on to 'post modern'. The reality of this is plain to see around us; a bit of Gothic revival, a bit of Corbusian modernism, a post-modern frontage thrown in and a nice pseudo-Grecian facade of columns on the bank on the corner. Where original Grecian architecture all blended together, today's cities are completely opposite, giving a total sense of confusion.

This confusion is from too much and too many variations and styles. Unless openly trying to create confusion, those areas that follow a similarity of theme throughout are more comfortable physically and psychologically.

Where a mixture of styles and types confront the eye and psych it may be possible to pick a specific element that can pull a wide range of styles together. Use of a colour scheme with a dominant contrasting colour may work or interjecting elements of human scale such as street furniture or verandas can bring a changed feeling to an area.
MURALS

Understanding and using the above design elements of walls is important for creating interesting wallscapes in the urban environment.

As well as these more practical points there are more 'controversial' aspects of our wallscape. These are usually described as 'decoration', but can serve many functions. From mere decoration to social statement to creating a sense of neighbourhood focus.

The use of murals has been around for many years now and technically can range from simple graffiti to the more indepth abstract or more focused painting. Usually 'murals' tend to refer to images that have a sense of artistic depth, whether abstract or very practical.

Use of a mural in a chosen situation needs to be done carefully. Poorly placed murals can just add to the visual confusion. Used well, they can add not only colour but also wonderful surprises, i.e. street mural below.
NEAR AND FAR

The viewing distance of wallscapes must be taken into account just as the amount of time spent viewing is important. Depending on the distance from a wall more or less of all the before mentioned elements of the wallscape will be visible.

A wallscape sitting in a maze of streets will be seen both close up and from a distance. It will also be viewed for both short and long periods. But a study of where viewed from and how long for is important in the designs of any wallscape.

As noted in 'Responsive Elements': 1985, to ensure complete understanding of the elements, understanding what the wall will look like from different distances is very important. A good guide for creating a scale drawing to better understand a wall from a specific distance is:

![Viewing Distance Chart](chart.png)
A wallscape to provide maximum interest should provide between 5 and 9 distinct visual elements:
MOVEMENT: FAR TO NEAR

As we move towards a feature the elements of a particular wallscape become more visible. Our interest can be increased or diminished by what elements that wall contains. This may be colours, shapes, materials, scale or others.

As well the vertical elements we pass by change because of that movement. If the movement is very rapid, i.e. vehicular, the elements the eye sees are much more spaced out. At walking speed wall elements need much greater attention to ensure they provide a full and rich experience.
Moving amongst the different physical elements, humans make decisions within many varied situations. Often these decisions have become so 'normal', through cultural conditioning and time, that people do not consciously realise that they are making them.

If we understand that there is a large amount of decision making taking place as people move through the urban environment, it follows that what is within the space and on the walls is giving specific cues. These cues are interpreted differently by each person.

Within the urban environment then, we can identify two main attributes. They are not exclusive from each other.

1. The physical components; light, colour, planes, form and style etc.

2. The behavioural component; how we perceive those physical elements.

In the best situations of our urban environment those physical components reach out, creating inter-relations and tensions or excitement, between themselves and other physical components. A sense of rhythm in the foreground is repeated in the background.

Our reactions or behaviour to these physical components follows directly with either some form of understanding or a sense of confusion. These reactions will vary according to our individual understanding of the world around us.

But once an understanding of these components is achieved it only serves to remind us of the contemporary problem we face of bland walls and reflected from bland buildings that lack any elements for inter-action.

When buildings are used as entities in themselves in an attempt to establish completely new styles, they most likely end up repelling rather than attracting inter-action between themselves and other buildings. This is reflected in our walls. The worst are those that are so sterile and devoid of any character that they stimulate no desire and evoke no response.

In this sense it is time for a new understanding of design in an urban world. A design understanding that is not dependant on stylistic imitation but one that incorporates the elements of this design study. A policy of design that both acknowledges and understands the relationships of our walls to their landscape setting and also to themselves.

Our urban walls are changing very rapidly. Much of the general response is to cling to our past, to those walls that are familiar and comfortable. Part of this response can be understood as not just upset due to the loss of our history's past but also very much as a sense of dis-satisfaction with the emerging new building styles and walls.

Instead of this sense of dissatisfaction, why isn't there a sense of comfort, understanding, of positive excitement with these new walls that line our streets?
Why is there a feeling of poor quality followed generally by the bland and boring.

It is time then to adopt a new and active focus for the wallscapes within our urban environment. With good understanding of the elements that make up our wallscapes, the underlying basis of the design of our walls will reflect understanding which in physical terms elicits a positive response rather than the negativity heard at present.

Our world around us should reflect our greatest potentials. Our walls are that reflection and only through understanding and good design will these potentials in our wallscape be reached.
APPENDIX 1: BRAD DAVIS STUDY

Brad Davis in his "Report on the Development of a Research Technique for Behavioural Design" has begun to look at the different elements which people respond to when making a directional choice.

He identified two main attributes:

1. The physical component, including walls.
2. The behavioural component.

His results are most interesting and a worthwhile addition to our understanding of walls.

Using a set model and a video camera setup, he was able to test a variety of hypothetical situations where people make directional choices. Within these choices a pattern begins to emerge.

The unit for testing needed to be standardised and yet bear a realistic relationship to the real environment. What emerged was a framework with two enclosing side walls (b1 and b2). The back wall (C) is a partial screen with the ground plane (A) forming a solid surface. Within the unit an internal object (D) serves to help focus direction.

Movement occurs from one end towards the other.

As the participants move through the unit, a "decision making point" is reached. This is based on the cone of vision of the person. At this point the person decides which direction or exit to follow.

Therefore the participant reaches a decision making point and then becomes committed to their directional decision.

Through manipulation of the internal object (D) a directional response was established. Five alternatives were chosen.
As well a sense of Scale was necessary. This was established by use of three vertical alternatives.

Although there was a vast amount of combinations that could be chosen, using 20 it was possible to comprise a total sequence.

Therefore an example looks like this:

Using this model Brad Davis achieved the following results.

While this is a simplistic model it begins to show us that the elements in our environment, in this case scale and directional elements do have an impact on our behavioural responses. Much more research needs to go into this area.
bibliography


PHOTO LIST:

P1 Paleolithic Age Mural. Lascaux, France Billboard Art, p.8.


P3 Parthenon Freize (The Elgin Marbles) Color Outside, p.10.

P4 Chinese Billboard Billboard Art, p.73.

P5 Giant Roast Beef Sandwich Billboard Art, p.77.

P6 Montsouris Telephone Exchange Mural, Paris Outdoor Color, p.3.


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P9 Wall Decoration (Window), Recco, Italy Outdoor Color, p.31.


P11 Oriental Parade, Wellington.

P12 The Textile Centre, Auckland

P13 Warehouses, Blair Street, Wellington

P14 Painted Brick, Wellington

P15 Ascot Street, Thorndon, Wellington

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Lambton Quay, Wellington
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