

In a way, web publishing will be able to contribute to “a communications network based upon the accurate reproduction and exchange of signals in time and space” and this could facilitate control and communication in technology-human fusion — human and its extended mechanical organism (ed. Featherstone, 1995). This might enable easier acquirement and shift of culture. However, there remain many obstacles.

“Colour as a tool for e-branding”

How can colour as a semiotic sign be effectively implemented in web site design, so that e-branding of that site can be more interactive with the viewers (the clients)? – “Technology, Culture and Change”

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Nominated reader: Eun-Seon and her husband

Eun-Seon is my friend. She has been working as a graphic and a web designer for the last 6 years. She has expressed her interest in effective interaction between the viewers and the web space through colour with other design factors. *I hope this essay will let her examine effective colour application that may cause active interaction in web space.* On the other hand, her husband, having his BFA degree in industrial design, is a brand manager. Eun-Seon has said that he often approached his work with solutions regarding design. They sometimes work together as freelancers in a team. Accordingly, they often share their thoughts and trade opinions about work.

The content of this literature will include the following:

Prefix

Parameters of colour application in e-branding

Colour as a semiotic sign and e-branding aims

Form supports colour sign

The power of colour vision

Case study

Relevant issues

Prefix

Computers allow us to access the World Wide Web for both information and entertainment in various forms (audio, video, and web casts). Information is at our fingertips 24 hours a day, 7 days a week. And just as we were getting used to logging on and surfing the Web, we see technology change again with a shift toward wireless Internet communication on cellular/PCS handsets (Breakenridge, 6). Thanks to this technological innovation, more interactive information transaction between a human and a machine (or between humans) is becoming available and development of data managing system enables living within the presence of various times. In short, it could be said that we have got a “Networked human reciprocal time¹” (Wood, Tacit Knowledge) and furthermore, “Networked machine-assisted reciprocal time²” (Wood, Towards a Cybernetics of Presence). Actually, boundaries between real world (off-line) and virtual world (on-line) is becoming diminished.

Semiology-Marketing is the study of signs and their impact on consumers. Similar to colour theory, they express and follow certain rules, often including subconscious psychological factors, which semiology detects and formalises. The designer or architect begins with an analysis of needs, in order to adhere to the company style guide and adapt his design to the circumstances. As in graphic design, the art is in diagnosing the needs and solving them without the user realising (“Our Expertise: Semiology-Marketing”).

However, throughout this evolution of technology (dating all the way back to the days of the first printing presses), one concept has remained constant—the power of the

¹Networked Human Reciprocal Time: “The sense of shared pace when co-operating with others (e.g. mobile phones used to regulate the agreed time of a meeting, whilst participants are travelling toward each other).”

²Networked, Machine-Assisted Reciprocal Time: “The semi-automated, distributed systems of flow, using product tagging, product code readers, and databases, e.g. with PML (Product Markup Language).”

brand³ and effect on consumer behaviour. And although technological change is thrust upon us, brands survive disruptive changes as long as their historical promises stay intact for branding (Breakenridge, 6). Abreast of this tide, a concept of e-brand (electronic brand) has been invented and the Internet has been recognised and employed as an efficient channel among various media for branding.

While, as in advertising and branding in the real world, colour influences as a semiotic sign on interaction on the Web. Seemingly in a brick-and-mortar branding, appropriate colour application that can touch the viewer's sense across web space is extremely difficult.

Parameters of colour application in e-branding

Realistically, effective colour application in branding is tremendously difficult because there exist many parameters such as age, gender and even income in terms of colour meaning. Ethnographic, geographic attributes as well as demographic factors provide colour meaning complexities. Likewise, efficient colour application in e-branding is more challenging because it is unimaginably difficult to take aim at a precise target audience. Web media's accessibility has relatively less limitation than that of other channels. Reversibly it becomes harder to have an e-branding scheme that targets everyone; as a brand becomes more globalised, its various audiences might have more different interpretations on colour meaning.

Whereas, as the origin of e-brand can also add complexities on proper colour application. There could be two cases: firstly, an e-brand may be a brick-and-mortar's Internet presence; secondly, a brand may start as a brand online – an e-brand. Colour application in the former case could be more difficult because applied colours for both the real world brand and the e-brand are likely to be more conflict. Colour conflicts may occur by colour difference on a monitor to a web designer's preference on colour. For instance, predominant background colours on a web site wane brand colour from the real world brand

³The concept of brand was present for a long time. For instance, some producers labelled names on their products to differentiate them from their competitors'. Mostly, the aim of this labelling was to emphasise the product's excellent quality or novelty.

In the next part, I will examine a breakthrough to improve this issue in the interrelation between colour function as a semiotic sign and the aims of e-branding.

Colour as a semiotic sign and e-branding aims

To begin with, the e-brand starting as the real world brand will be mostly dealt with in this literature (In this case, colour application should be fulfilled with more careful colour scheme; otherwise, it could do serious damage on its original brand image).

Firstly, the following question arises. Up to which level of a semiotic sign – iconic, index and symbolic sign, should colour symbolic meaning be dealt with in e-branding?

Next question might be: how aspects of colour as a semiotic sign are related to the purposes of e-branding below?

The (rough) purposes of e branding:

- To increase brand awareness
- To enhance brand loyalty
- To cause product purchase (eventually)

Colour application in Web page design is an object for interpretation of the brand. Here, I characterised the different modes of reference of colour application in Web page design applying Peirce's distinction of iconic, index and symbolic signs. The application of the semiotic sign is an interesting conceptual tool for interpreting representational qualities. Especially iconic and indexical signs seem to structure representation in a new way from the design (sometimes, they seem to be strange and even ugly in an aesthetics point of view). Of more general significance is the fact that a semiotic approach can provide concepts that explain the interaction between the viewers and the Web page of the Web site) (Vihma, 10-11).

Semiotic terms

language, communication, meaning, code, sign, icon, metaphor, symbol, message, signal and information

This approach is much related to the current branding situation where colour symbolism is regarded as a method to read multinational consumers' mind and induce buying from them.

In this literature, I will attempt to show how signs (colours) are applicable so that their functions can be understood and how they can possibly be used for e-branding (or branding) purposes; naturally, it should be discussed with regard to Web page design because colour is an important design factor for it.

Now, referring to Vihma's reinterpretation on Peirce⁴'s model -- "The sign may refer as an **icon**, **index** and a **symbol** to its object O" (Vihma, 66), colour (sign) may represent icon, index and symbol by the viewer's interpretation.

- The colour of a product (the web page design) may function as an iconic sign when it refers to another thing with a similar colour. Grey may refer, for example, to concrete even though the material is not really a concrete.
- "An index draw attention by being really existent and not by being similar, as the iconic sign does." A web site's menu bar may be an example of this indexical function of colour (e.g., <http://www.amazon.com/exec/obidos/subst/home/redirect.html/102-0337790-6386517> shows this well).
- The cultural and social background of the person who interprets colour also influences colour interpretation. Therefore, different persons may have a variety of feelings on the same web page designed in the same colour application. This can be said as a symbolic sign of colour (Vihma, 66-70).

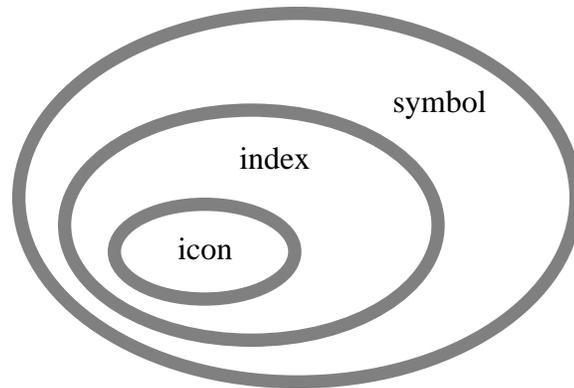
Vihma also summarises, "An index may include an iconic sign; a symbol may include both iconic and indexical signs" (75).

⁴ Peirce offered a triadic (three-part) model:

1. The *representamen*: the form which the sign takes (not necessarily material).
1. An *interpretant*: not an interpreter but rather the sense made of the sign.
1. An *object*: to which the sign refers.

The interaction between the representamen, the object and the interpretant is referred to by Peirce as 'semiosis' (ibid. 5. 484). Within Peirce's model of the sign, the traffic light sign for 'stop' would consist of: a red light facing traffic at an intersection (the representamen); vehicles halting (the object) and the idea that a red light indicates that vehicles must stop (the interpretant) (Chandler, 32-33).

Picture 1 My interpretation on colour as a semiotic sign in the light of Vihma's view.



Comet's superstore may be a good example to illustrate colour aspects as semiotic references. Angela Wright, a colour expert, selected blue and light orange for the signages which indicated 'white goods' and 'brown goods' ('white goods' is the trade name for domestic appliances such as fridges, freezers, cookers, washing machines, etc – isn't it colour as icon? While, 'brown goods' is the more leisure-oriented items such as TV and videos, music systems, camcorders and other gadgetry). For the flooring on domestic appliances' side, aqua blue and for that on brown goods, lightish violet, were adopted. Spring green was selected for the cash desk. Here, violet shade was in association with the future, modern technology and green symbolises 'money.' Lastly, yellow was added for the central aisle flooring, which divided the two sections. Those colours, firstly, were used for indexing each section of store inside. Secondly, spring colour group such as light orange, spring blue, spring green, yellow were appropriate for the brand concept, 'cheap and cheerful' and for the target, young people's sensibilities.

Colour as a sign seems to offer possibilities for a multifaceted interpretation rather than leaving room for only one way of looking at it. Different signs merge in a person's experience of a product. Signs do not function separately and individually, but form multilayered references. The complexity of the sign (colour) is increased because the references are not stable or fixed qualities of the product. Since references of the sign can be interpreted differently at different times and in different situations, the analysis cannot be final and complete (Vihma, 90).

Form supports colour sign⁵

According to Vihma, the attributes of the product as an iconic, index and symbolic sign are:

Iconic	Index	Symbolic
a) The tradition of form	a) The trace of a tool	a) Graphic symbols
b) Similar colour	b) A pointing form	b) Symbolic colour
c) Similar material	c) Marks of use	c) Symbolic forms
d) Metaphor	d) Other traces	d) Symbolic positions and postures
e) Style	e) Light and sound signals	e) Symbolic material
f) Similar environment	f) Sound of use and noise of a product	
	g) Smell of a product	
	h) Touch of the material	
	i) Graphic figures on the product form	

(93-101).

The attributes of Colour as an iconic sign is not very different from the above findings.

Interesting point, however, is that colour's indexical symbolic function is too vague; isn't it possible that one colour can indicate certain colour without metaphoric intention? While, iconic and symbolic (individual or mixed) applications as colour symbolic sign are often found in design field.

The fact that should be deeply thought is that colour could be too loose and broad a reference to function as an iconic sign. It may be that only colour is not sufficient for a semantic interpretation of a product (the Web page design). The reference of a colour may rather be seen as support for the reference of the form. The role of colour in my interpretation will be to strengthen the functioning of a form as an iconic sign. If the role of colour is considered in relation to the form or even subordinate to it, its broad scope of reference will be reduced. White, for instance, may not always represent a freezer.

Particularly, shape and texture help colour sign to be delivered more precisely.

⁵Colour sign means colour's semiotic sign (that is, icon, index and symbol).

Button's shape at e-commerce sites might add strength on colour meaning to induce the consumers to buy (Morton, 65). Form in web page design is more critical than in other design fields because of limited colours of the colour palette such as 216 colours, which are known as safe colours in web page design.

On the other hand, some close and important colours in the real world may perhaps dominate the interpretation. They stand out. They stay in people's minds for a long time, so that people may even think that the colours are permanent references. For example, an orange-red colour for a refrigerator does not look natural.

The iconic sign of a colour can be mixed with its symbolic quality, which will be dealt in the later case study (Biotherm's web site design) again. A product's (Web site's) symbolic colour may refer to a cultural habit. The content of the symbolic colour is learned. In this sense, it differs from a colour as an iconic sign, which may be a personal impression of a possible meaning.

To sum up, in many situations, colour cooperates with form so that it can function as an iconic sign or a symbolic sign. However, colour preserves its superior position from the point of view that colour is generally perceived most quickly.

Colour vision's power

Colour has been employed as an effective communication tool in advertising. It has very clever and persuasive influence: "because colour exerts its effects on a subconscious level (not in all cases but in many cases), people do not realise that they transfer its effects onto the contents of a package (or a product) or onto an advertising message." Not being aware of the decisive influence of colour on them, they fail to be defensive on purchasing a product or a service ("consumers have a tendency to mistrust advertising because they perceive it as a sort of manipulation").

"From the moment we know man experiences a message in colour and how he reacts on the base of these sensations, it is possible to influence him in a buying situation by selecting adequate colours." Uneasily, however, "colour is a moving element. Each colour has a specific moving direction and this sensation of movement contains a symbolic value or a language." Indeed, colour has changed its symbolic meaning as time

and space and accordingly efforts are made to define colour's symbolic meaning for the consumers (Favre, 98). These efforts have been made in branding as well.

Branding and design consultancy Cobalt has recently been using the expertise of University College London's psychology department on graphic and environmental projects for two clients in the IT sector. According to Iain Ellwood, strategic director, the project was "(about) taking the human behavioural aspects of psychology and applying them to brands," and the research result shows that colour is "more memorable than shape or name and nevertheless it has been very underestimated. Cobalt also used the Myers-Briggs personality test (a system of personality evaluation base on the psychological theories of psychologist Carl Jung) to define the nature of the client and its brand, then match the findings to suitable colour combinations to give the desired effects. Realistically, despite the importance of colour psychology (colour symbolic meaning) in brand, it has been often found that colour scheme is built and manipulated as a designer's preference on colours; despite the efforts to find the proper colours for the target, it is quite difficult to define the symbolic meaning of colour which has an effect on brand marketing. Many parameters exist: gender, age, income, culture, etc. Each individual and each group has different meanings and preferences to certain colours. Given real brand as a model, for instance, tangerine coloured iMac is more sold in the Far East while Indigo blue and graphite are globally most popular (Buxton, 24-25).

Pitifully, a clear solution on this issue doesn't seem to exist. However, many efforts have been implemented in branding and some cases seem to be successful in interacting with the consumers through colour psychology (colour symbolic meaning).

Execution with colours can improve the efficacy of a message. Those executions are: the *integration*, the *resemblance* and the *metaphors*.

- Colours can integrate, that is they create a visual unity of the elements shown in an ad or a poster.
- Colours can make objects and scenes resemble very closely what they look like in real life.
- Through symbolic metaphors, colours address themselves to the imaginary and imply comparisons. Hence identity is transferred from one object to another (Favre, 100).

The three colour functions above are very much alike with colour's aspect as a semiotic sign -- index, iconic and symbolic sign and they effectively function in connection with the factors of 'colour vision' in e-branding.

The attributes of 'colour vision' below are keys that help colour function as a communication method of interpreting information in a web interface (Morton, 32).

Firstly, on a physiological level, colour affects the mechanisms of the human eye. Muscles either relax or tense up, pupils expand or contract. Secondly, on a psychological level, colour delivers powerful subliminal communication. It either reinforces and enhances the product or service or works against it. Thirdly, on an aesthetic level, the overall colour design either creates a pleasant visual harmony or produces a cluttered, chaotic experience (Morton, 39).

Each attribute of colour vision in web space might be discussed as follows:

- Optical (physical): up to 30% of visitors (potential customers) may have some form of a physical visual disability. They may belong to the colour-blind and aging population. While, colour distortion and colour difference on screen are other obstacles that might disturb clear delivery of messages through colour (Morton, 32).
- Symbolic: The right colours – when combined with professional artistic design, appropriate user-interface, and content – are a primary source of subliminal power and persuasion.

The wrong colours can be an irreversible mistake and may keep the customer from exploring the site long before they even consider purchasing a product. For example, extremely saturated colours for television advertisement may not be successful when applied to web page of an e-commerce web site because sustained viewing time and intended results are different (Morton, 56). Otherwise, the same colour palette as that for off-line branding might be used so that it can provide coherent advertising, branding effects (refer to the case study of 'Biotherm').

Symbolism Analysis

As a preliminary step in determining the most appropriate colours for an e-commerce site, the following attributes of colours provide valuable insights:

1. Bright vivid colours, such as pure red and blue, are energizing and outward-focused.
2. Extremely bright, electrifying colours, such as lime green and fuschia, are festive, “hip” and dynamic.
3. Muted, grey-based colours, such as taupe and blue-grey, are sophisticated and reserved.
4. Dark shades, such as deep forest green and navy blue, are dignified and professional.
5. Light shades of most colours, such a pink and light blue, are delicate and ethereal (Morton, 66).

and high technological product and service often employ this colour. Bright colours appeal to youth; complex colours – muted colours-appeal to higher socio-economic groups.

In the next stage, the aspect of colour as a symbolic sign will be more deeply examined through few case studies.

Case study

“Few would agree that colour is one of the strongest and cheapest tool in design. Used judiciously, it can delight the eye, aid communication, boost designs commercial effectiveness”
“(Buxton, 24).

Colour as a suitable reference should be applied to e-branding so that the brand can be successful in e-branding purposes. The next shown examples indicate the findings how certain brands employ colour as a semiotic reference tool for their branding purposes. In the following findings, Libra’s case illustrates how it has implemented colour as a symbolic reference in their e-brand marketing so as to raise brand building and brand awareness and eventually brand loyalty. Whereas, to achieve brand building, brand awareness, Biotherm seems to use colour as an iconic sign and the colours might

hint its symbolic meaning; however, the latter references seem to be dealt with in a level of general meaning.

Libra

The feminine hygiene product company, Libra, targeted young people between the ages of 12 and 17. Although this target range seemed to be too narrow, the analyses on Australian and New Zealand markets indicated that the girls of this age “develop a very strong loyalty to a particular brand of feminine hygiene product.” Naturally, the importance of brand marketing strategy to enhance brand loyalty has to be emphasized and Internet was chosen as the communication channel for that because of the large Internet penetration in young Australians (Lindström, 160). The e-branding was successful in Australia, so Libra tested it in Denmark of Northern Europe. The result surprised everyone. The Libra Web site of which content and design were attractive enough to increase the consumers’ brand loyalty did not work in the Danish market. What women loved in Australia was deemed boring and old-fashioned in Northern Europe. Austrian institutional education system emphasizes equality and discourages individuality. Whilst, Danish students from the early age are educated to think clearly and express thought in an open atmosphere. So, the same web site as that of the Australian market wasn’t direct enough for Danish girls and young women. It was boring and didn’t satisfy the open-minded culture that informed their perceptions. As a result of this, almost 90% of the site’s content and creative concept had to be reworked for each market. Even the style had to vary according to the culturally-informed taste of each market.

Although the Internet is a channel accessible to global consumers, it doesn’t mean that the web site can be accepted and enjoyed by every international consumer. So, localization of e-branding is becoming a key factor for cultivating multinational brand recognition. In this context, localised web site design can be the first step for global branding and a colour palette appealing to the local target will contribute to the brand’s success. In this point, it may well be that symbolic colours are more suitable for sense and perception of the local clients.

Comparison of www.libragirl.com.au and www.libresse.dk

(I use www.libresse.no instead of www.libresse.dk as an example here because www.libresse.dk's web site is sometimes not displayed properly at some users' interfaces. Furthermore, www.libresse.no's web sites seems to have been designed very similarly to www.libresse.dk's and the target audience of both Norway and Denmark web sites are likely to have similar tastes in terms of e-branding. This is because they may have similar cultural background from the view that both countries are northern European).

Libragirl's web site

(<http://www.libragirl.com.au/default.asp?GUICMD=LOGON&type=1>) gives youthful, romantic and feminine impression. It is undeniable that its curve-sensible illustration style and colour palette are strengthening this sense. Vivid yellowish pink, yellow and pale yellow and yellowish green are used for this web site; most of them are the signal colours for the meaning for 'youth,' and especially yellow, the background colour, symbolises excitement, emotion and cheer (Cooper, 39-40).

To synthesise analysis, we can be aware of that those colours are used for the young girls who are feminine and want some fun through this web space.

On the other hand, the web page of www.libresse.no is a striking reversal. Very differently from that for Australian consumers, it doesn't seem to be focusing on femininity and youth. Grey tones, dominant colour in this web site, are instead alluding neutral sex image. Furthermore, dynamic animation impacts and straightforward clear layout support this as well. Looking into the colour palette, yellowish pink is left out and yellow is used in relatively small part. Greys instead took this space and it delivers us a smart and more matured impression. Accordingly, it is deemed to be more corresponding with the Danish young females, the target group of Libresse.

Biotherm

Biotherm, French skin care product company, transferred its brick-mortar off-line brand image intact online. Biotherm's brand colours are white and blue, also silver (or grey) is added with various shades of blue tone in all colour schemes for the whole design product line; they carry on those colour palette in package design, display and even the

employees' uniform. This rule is also conveyed on its e-branding scheme (e.g., <http://wwwus.biotherm.com/us/home.cfm>; please explore 'Store Locator' and 'Your Catalog').

On the basic common content, similar layout, images and identical colour palette are being applied for all web site designs for each country's viewers and trying to effectively communicate with multinational consumers across culture

(please examine this through the following web sites –

<http://wwwau.biotherm.com/au/home.cfm>,

<http://wwwjp.biotherm.com/jp/home.cfm>,

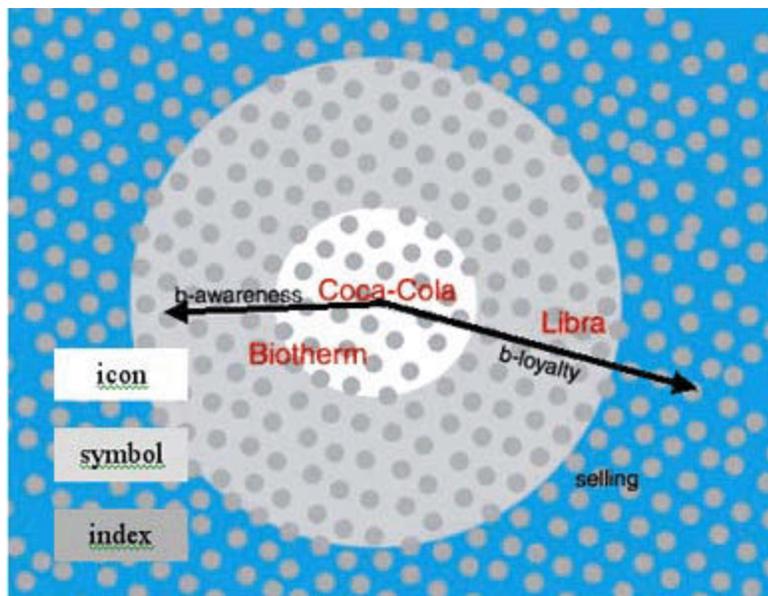
<http://wwwfr.biotherm.com/fr/home.cfm> and <http://wwwpt.biotherm.com/pt/home.cfm>)

This may be the most generally adopted e-branding tool by, so called, 'big brands' for the global market. If so, what is the purpose of such global e-branding? Mostly in these kinds of cases, increase in established brand awareness is the main aim. With respect to semiotics, it can be said that the click-mortar functions as an index sign of an already existing brand, the brick-mortar. Perhaps, the already existing brick-mortar brand might have had index, iconic and symbolic meaning for itself. This is also applied for the brand colour. For example, if we examine the Biotherm's case, white means purity, honesty and clarity; blue symbolises the product component concentrate, spar water. In conclusion, the same colour palette as the off-line's can become an iconic (or index) sign for the on-line brand image; it is an index sign which carries an iconic, index and symbolic sign values that its off-line brand has.

The important point is that the symbolic references that each e-brand tries to deliver to the viewers have different level of depth (if assessed by the consumer's view). The depth of symbolism may be estimated by how closely the symbolic sign is customised for the consumers' perception. Biotherm uses coherent colour scheme- same colour palette is used throughout uniforms, shop outfitting and site design (even name badges and price tags) and this is giving the iconic symbolic value (indexical symbolic meaning might be included). That is, "the website and real-world store and all the consumers' communications share the same identity so that messages to the customers

are unequivocally from the brand” (Lindstrom, 2000). In this sense, this symbolic approach seems to be more brand awareness-oriented.

Whereas, symbolic approach of Libra seems to be more brand loyalty-oriented. Their colour schemes for the products, the websites are different as the country where their products are sold. This shows Libra’s branding philosophy of customisation. Their web site seems to be aiming at strengthening brand loyalty by emphasising friendly feeling rather than by giving coherent value with other design elements⁶; colour application is also being applied with this purpose. Likewise, it can be said that the Libra’s websites suggest a deeper level of symbolism.



Picture 2 Brand diagram showing the interrelation between 3 e-branding aims and 3 colour aspects as semiotic signs.

Relevant issues

Pantone’s ambition to standardise digital colours toward web space

“For a brand to function properly as a visual trigger, it has to appear the same, in the same colours, on everything from billboard to french-fry box to Web site.”

As design began to go digital in the early in 1980s, Pantone saw a whole new market in need of standardisation. The company quickly pursued licensing agreements, putting its name on such hardware as a calibrated Radius monitor and on software such as Quark

⁶Design elements here indicate other colour schemes for products, packages, shop outfitting and even uniforms.

and PhotoShop. Pantone now wants to become a standard in e-commerce by licensing computer monitors and Web sites that ensure that online shopper views a product in its correct colour (Vanderbilt, 56-57). However, monitor calibration and the usage of real color chips are very necessary to deliver true colours .

Seasonal colour palette

Many colour experts divide colours into 4 groups; so called, 4 season colour groups such as spring, summer, autumn and winter. It is known that those colour characters has a critical effect on colour symbolic meaning and they have subliminal influences on the viewers, not exposing their power superficially. Wright's project with Comet illustrates importance of a colour scheme, which is based on colour analysis according to the colour season. Wright advised colours belonging to the spring colour group for Comet superstore interior design and colour application based on that was quite successful. Ironically, the designer of Comet tried working out the project with almost the same colour palette as the one of Wright. Although the hues they used looked quite similar with Wright's, some of the designers' colour palettes were summer group colours, not spring group ones. As a matter of course, their colour application did not satisfy Comet's desire that the applied colours should create a 'cheap' and 'cheerful' atmosphere; summer colours may hint cheap feeling, but not cheerful impression (184).

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Web sites list

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<http://wwwjp.biotherm.com/jp/home.cfm>

<http://wwwfr.biotherm.com/fr/home.cfm>

<http://wwwpt.biotherm.com/pt/home.cfm>

Libra web sites

<http://www.libragirl.com.au>

<http://www.libresse.no>

“Our Expertise: Semiology-Marketing.” Archibald.
<http://perso.wanadoo.fr/archibald/profile/expertise.html> (7 Feb. 2001).

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