Industrial colour invention: a comparative analysis from the perspective of the colourist designer

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ABSTRACT

In this article a comparative study of two different colour invention processes in the paint and coatings industry from the perspective of the colourist designer is presented.

Our research is based on a thorough analysis of colour communication tools and on empirical data from interviews with actors of two leading companies from Latin America and Europe.

In both processes we find two distinct sets of expertise. In the first one we identified, the primary driving expertise is from the field of engineering and marketing. In the second one, we find the expertise of the colourist designer, from the field of applied arts, supported by marketing considerations in an iterative process.

In our work we study how these different approaches impact the resulting colour palettes, that is, the product ranges reaching the market.

Our results point out an ongoing evolution in the invention of colours, strongly linked to the introduction of the artistic sensitivity of the colourist designer, in an industrial context.

KEYWORDS colourist designer; paint and coatings industry; colour invention; colour communication tools; comparative analysis.

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1. Introduction

Colour communication tools, known as fan decks in the industrial context, have an essential role to play for market success in the paint and coatings industry.

In this article we present a comparative study of two different approaches to develop and communicate colours in the paint and coatings industry and the resulting colour communication tools from the perspective of the colourist designer.

Colour invention processes in this industry have to take into account a variety of considerations and constraints from vastly different domains and contexts. Among these there is the field of marketing, corresponding to a mostly empirical, sales-oriented approach to colour, having received considerable attention from the scientific community (Journal of International Marketing, 1993 - 2012) over the last decades. On the other hand, approaches of chromatic design from the field of applied arts have not been studied in an industrial context from the perspective of poietics. This study aims to partially close this gap.

Our research is firmly based in the framework of *action research in arts* (Liu, M., 1997 ; Caumon, C., et al., 2016), based on *interviews* (ethnological approach, see Copans, J., 2011) with the main actors involved in the design of these tools - and their analysis from the perspective of *poietics* (Passeron, R., 1989, 1996).

The key actors and the colour palettes themselves will be our main object in this study that is based on data from two paint and coatings companies who are market leaders in their respective territories. We are going to designate the first one as Company A (operating in Latin America), and the second one Company B (operating in Europe).

The fan deck as a colour communication tool of reference in every paint and coatings industry is designed to carry out a particular function, which is not only to simply communicate colours and to facilitate the act of selling them but to activate the imagination of a specific user. The analysis of these tools allows us to identify the main interests, questions and concerns involved in every phase of the creative processes, supported by interviews we conducted with the relevant creative actors.

The key actors involved in these processes develop colour communication tools following their individual methods to optimally address the specifics of their market environment and its particular cultural traits. The interviews we conducted allowed us also to gain unique insights into how the results of market research impacts the individual creative process in each company and how it drives localised colour innovation processes adapted to the respective market environments.

It is important to say that our interest is not only about cultural influences that we identify at the heart of the creation of each tool, or the strong impact of the sensible and differentiated perception of colour individual to each actor and her or his specific set of expertise. Our main interest is, firstly, to investigate how an actor from an artistic background, the colourist designer, operates under the constraints of an industrial environment. Secondly, how the very different background of another actor (engineering/marketing) in the equivalent position at another company influences his creative process. Both creative settings have - to the best of the author's knowledge - never before been investigated in the field of poietics.

Identifying the impact of two markedly different sets of expertise of the involved actors helps us to respond to our final interest, which is to identify the artistic complexity that is involved in the process of defining colour phenomena in this industry.

The art of placing colours together will allow us to understand better how today's key actors manipulate colour parameters, how they interpret them but especially how all of this will help us in our intention to evolve today's creative process by implementing in the industry creative methods of the colourist designer's scientific and practical expertise.

Questioning and analysing our own perspective and the professional experience from the field of engineering and marketing will lead us to new insights in a field still little explored from the perspective of poietics.

2. Methodology

We have conducted, in a first step, interviews with the key actors involved in the design of colour palettes and the corresponding fan decks as they are the most important colour communication tools in both companies. The detailed interviews allowed us to gain a deeper understanding of the terrain and have provided the data for a direct comparison of the actors' expertise and the importance of their artistic approaches.

In a second step, a detailed analysis of both companies' main fan decks has allowed us to build hypotheses about how the act of creation and the individual perspective of the involved actors reflects their specific expertise as well as the cultural environment of the respective target markets.

Considering the complexity of the colour phenomenon (Pogacar, V., 2012; Ladnytska, O., et al., 2015), the analysis of colour communication tools in an industrial

environment implies a significant reflection on categorisation and classification. The objective of our analysis has thus been to identify the main systematics employed: systems of classification (chromatic groups), a quantitative analysis of the colours present in the considered tools and the used approaches of nomination and codification (we base ourselves on the anthropologic work of (Berlin & Kay, 1969), always taking into consideration the whole creative process.

As a reference and to determine the colorimetric limits specific to each chromatic group, we use the NCS (Natural Colour System). Our chromatic data is translated using the NCS Digital Atlas and the NCS colour palette itself to identify where the chromatic groups (colours) are located in a Standard Color Space. We take into account both the horizontal, which is identical to the chromatic circle, showing the hue, and the vertical section of the colour space, corresponding to the nuance.

Our general approach is expressed in the words of René Passeron (René Passeron, 1989) as, "*a normative reflection on the act of creation*" in the context of our research in between the realm of the arts and the industry.

It is in this manner that the confrontation of the creative reflection we find in each terrain with our own creative process makes us consider the specific codification and classification of each terrain as a key factor in our analysis of how these different approaches impact the resulting colour palettes that reach the market.

3. Results I - Analysis of the interrelation between creative process and communication tools

In this section we give an overview of how Company A and Company B function when it comes to the development of their colour palettes and the design of their fan decks. Communicating on all aspects of colour and identifying the most appropriate qualifiers and nuances that correspond to the specificities of a given market are the key principles when it comes to the operating modes (*opus operandi* (Passeron, 1989)) playing an essential role in each reflection about colour.

Following our analysis of the conducted interviews, the actors involved in the creative process agree with regard to the analysed tool appearing in the industry as an essential element that has to help and guide every customer or professional to make a colour choice. However, it is interesting how, in the case of company B, we can identify an approach in which the fan deck is seen as a tool that is endowed with the power to bring a poetic aspect into people's lives by proposing a unique system of nomination in combination with a simplified system of codification.

In comparison, in the case of company A we find a tool of similar general characteristics that has, however, been designed from a point of view closer to the fields of engineering and marketing and in which, instead of proposing only one system of colour nomination, two different numeric systems of colour codification can be found, and furthermore a more poetic system of colour names. This particular choice has been made to appeal at once to the three major user groups of the tool. These two different methodologies, each one developed over a period of one year of analysis and practical experiments and corresponding to mostly marketing-oriented strategies bring up a variety of questions about the position of the poetic dimension in each creative process and its impact on the final result.

Paint & Coatings Industry	**Company A (Latin America)** **colour tool created in 2014**	**Company B (Europe)** **colour tool created in 2015**
EXPERTISE OF THE CREATIVE ACTOR	Engineering & marketing	Colour design & fine arts
COLOUR COMM. TOOL - CLASSIFICATION	8 chromatic groups (pastels, reds, oranges, yellows, greens, blues, purples, neutrals-earthy)	8 chromatic groups (whites, reds, oranges, yellows, greens, blues, purples, neutrals)
COLOUR COMM. TOOL - NOMINATION	3 different codes : 2 numerical codes + 1 descriptive code	1 numerical code

Table 1 - Analysed properties of industrial colour communication tool design processes

Anticipating the specific function of each of the tools helps the creative actors to define its performance, at the same time transforming a multitude of colours, taking into account either cultural particularities - the dominating factor we identify in company A (creative actor expert in marketing/engineering) - or taking a more scientific approach, such as we find in company B (creative actor expert in arts/colour design). It is understandable that marketing aims to respond to cultural particularities, since its principal objective is customer satisfaction (Madden, T., et al., 2000), contrary to the artistic approach that aims for creative freedom.

For a paint and coatings company, developing a unique colour tool including a proprietary codification and/or nomination system represents a significant investment, thus this step is taken typically only by companies that enjoy a solid market position. This is the case for both of the companies that are the object of our study. According to our interviews, the decision to create their own colour systems has been taken after long years of experience. For years, each of them worked with adopted systems and eventually with various suppliers from different parts of the world. The fan deck of company A was conceived in 2014 and it represents the first own tool developed by the company. This is the case as well for company B (first proprietary fan deck and colour classification system developed in 2015, described as an international colour system).

In *Table 1* we identify the main characteristics that are the focus of our study and that we consider as the principal factors involved in the design of the considered colour communication tools. Note that it is the very existence of these tools that renders accessible industrial colour universes to an objective analysis. As the author of (Guy Lecerf, 2014) puts it, "*the activity of the industry [makes us] think colour as something objective. [...] Colour [in the industry] becomes a phenomenon accessible to analysis, classification and reproduction*". However, being subject to methods of widespread mass market communication, it is inherently designed to appeal to a large number of individuals, for whom colour has to be perceived as something subjective that brings poetics into their everyday lives. It is in the presence of this tension between objectivity and subjectivity that the design process of colour palettes and the analysed tools takes place. Note that the categorisation into chromatic groups as well as the system of nomination/codification are the company's.

To first better understand how colours are structured in the industry and to identify how international colour systems influence the classification of colours in each tool, we analysed every chromatic group (eight in total) among the 1407 colours of company A and the 1650 colours of company B (a total of 3057 colours).

3.1 Fan deck company A (Latin America) – 1407 colours (colour tool A)

The colour tool A features a cover full of coloured flat geometric shapes, mostly triangular. The colours, mapped into the NCS Colour Space, have a saturation between 70% and 90%. The fan deck is of standard size of 4,7x26cm (in comparison with some other industry fan decks which measure 5x20,3cm, 5x22,8cm, 5,1x25,4cm, 5x26,5cm and 5x29,2cm) and starts off on the first pages with a succinct explanatory introduction to the basics of colour theory based on the chromatic circle, followed by an explanation of the colour codes employed throughout the tool.

It is starting from the softness and delicacy of pastel colours that our chromatic voyage then begins. Using the NCS colour system as a reference, we observe that the whole chromatic range of the corresponding colour family of the NCS colour circle (reds, oranges, yellows, greens, blues and violets) are covered in the same order as we find it in multiple *cross-cultural investigations which have typically found a wide variation in Color-naming systems* (Bornstein, 1973).

Every colour is situated at the top of the grey scale within the NCS colour triangle (which are the whites (W)), having less than 10% of black (S) and a saturation (C) between 2% and 10% for every colour. (see fig. 3)

Inside this group we also identify, in exactly the same order, the chromatic groups that constitute the corpus of the tool with the exception of the neutral-earthy colours group which appears at the end and represents the largest chromatic group.

It should be noted that in the neutral-earthy colours group we also identify the entire chromatic range of the NCS colour circle. This time, in the NCS colour triangle we see that the lightness of every colour is situated between white (W) 10% and black (S) 100%). In contrast to that, the saturation value (C) falls between 2% and 20% for every colour, rendering this family of colours rather greyish and dark.

As mentioned above, the development process of this tool is conducted by a creative actor whose formal expertise is based in engineering, complemented by professional experience in the colour industry in a marketing context.

Colour as an *objective entity* (Guy Lecerf, 2014) has to correspond to customer needs identified by market

research conducted by the company A [1]. However, not only colours corresponding to these objective requirements can be identified in the analysed tool. The sensibility of its creator expresses itself by the choice of an at the same time rhythmic and linear ordering of colours inside every chromatic group. This approach appears to be very intuitive, as colours can be found without intricate knowledge of the underlying systematic.

The overall ordering of colours clearly makes reference to the Newtonian colour circle, a universe intuitively familiar to a large part of the population, irrespective of culture, religion or education. Each page contains different samples with the same hue, from the lightest to the darkest. In this way pages with light colours (high lightness and medium saturation) and bright colours (high lightness and saturation) are confronted with pages with more vivid colours (medium lightness and high saturation) and dark and deep colours (low lightness and saturation), creating a colour symphony where far reaching delicate harmonies are enriched by more tonic and dominant notes. This is confirmed in our comparative analysis where chromatic groups proposed in the fan decks have been located in the NCS Colour Space as illustrated in our case study of the chromatic group of yellows (see section 4.1).

The rhythm is always systematic, but the transitions from one group to the following are always smooth, giving the impression of a continuum of gradually shifting shades. Another important point of the analysis, as we mentioned above, is the colour nomination. The chosen method is to confront descriptive codes with numerical codes. This multiple colour identity responds at once to the variety of potential users of the tool (numerical codes tend to dominate in professional environments, while in retail typically descriptive nominations are preferred) and reinforces each colour's brand identity.

3.2 Fan deck company B (Europe) – 1650 colours (colour tool B)

The second fan deck, also roughly following the standard size of this kind of tools (5,3x31cm) but a little larger than the colour tool A, exhibits distinctly different features in several aspects. Even if both tools use geometric shapes - mostly triangular - for their cover, this one only shows different shades of blues, purples and reds, with a saturation (C) between 40% and 70%. These colours (more sophisticated than those of the fan deck A) are applied in a gradient fashion leading to a 3D effect pattern that is then expanded on the back page of the tool in green, yellow and orange shades. But even if they respond to the same demand and we see a similar physical appearance, a simple look at the tool reveals that we are exploring a very different colour universe.

The first five pages present an introduction to the general spirit of the tool that includes an explanation of the system of classification used (how colour families are grouped, how the colours of each family are divided into different levels of saturation (from bright to shaded colours), how each page contains different samples with the same hue, from the lightest to the darkest, with exception of the whites - the best selling group - where the colour samples are bigger than the other ones in order to improve visualisation), and leaves the reader with the impression that we are inside a systematic classification that however tries to leave freedom and breathing space to the imagination of the user.

The first chromatic group also begins with soft and delicate shades, this time named 'whites'. In comparison with colour tool A, this first group does not introduce the whole range of colours that we find in the tool as it covers only five colour families of the NCS colour circle (-G80Y, -G90Y, -Y, -Y50R, -R). As the pastel group of tool A, in the NCS colour triangle, they are all situated at the top of the grey scale (W), this time having less than 5% of black (S) and of saturation (C).

This first group corresponds to what is designated in French as '*blancs colorés'*, i.e. we do not find pastels declined in different colour families here, but this first chromatic group is about the coloured lightness provided by the white, in a quite subtle way. Then, in the next group, subtle reds appear, followed by oranges, yellows, greens, blues, purples, ending with the group of neutrals. As for the colour classification inside every chromatic group, each page contains, similar to the first fan deck different samples with the same hue, from the lightest, on top of the page to the darkest. The difference here is that each chromatic group is divided into different levels of saturation and lightness. From bright colours to rich (high saturation and lightness medium and high), light (medium saturation and high lightness), muted and shaded (low saturation and all levels of lightness) colours. As a consequence of this choice, the rhythm present in the transitions from one chromatic group to another is markedly less subtle and more abrupt. The gradually changing shades we find in the tool A in the transitions between groups can be found here in the ordering of colours inside each chromatic group. A colour symphony is also experienced in here, but the difference is that there are no tonic and dominant notes that disrupt the rhythm, leading to a harmonic, smooth and delicate composition in perfect accordance with consumer preferences.

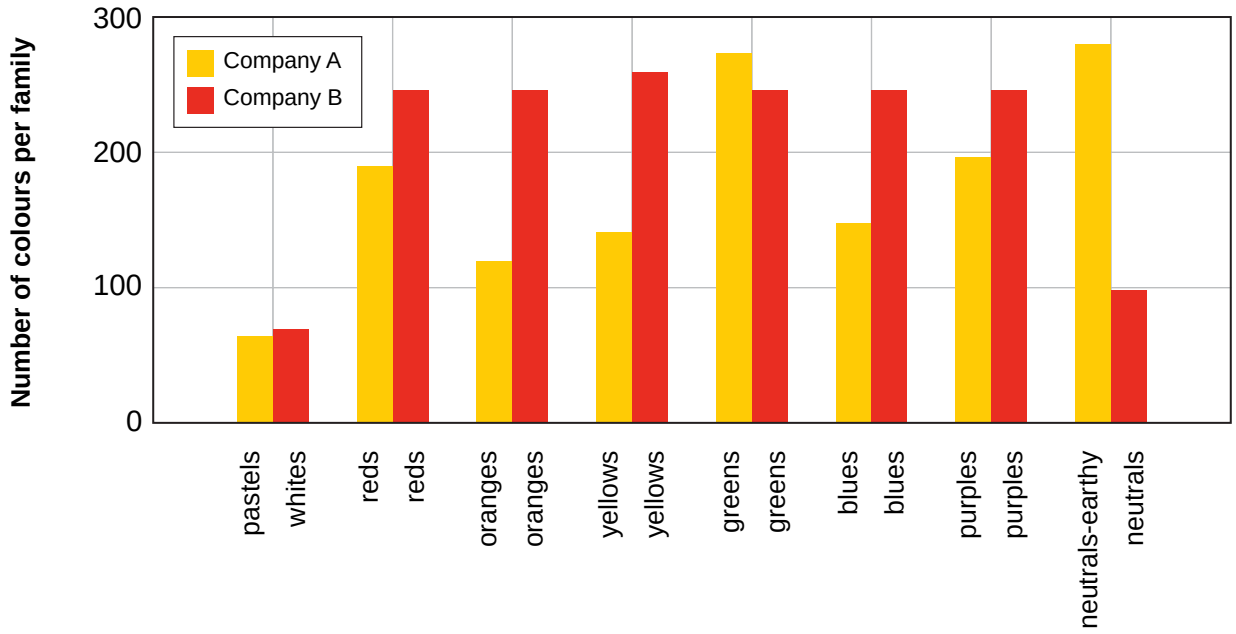


Figure 1 - Number of colours per chromatic group, (company A (1407 colours) vs. company B (1650 colours))

4. Classifying colours

In our study we could identify how the repartition of colours in the fan decks of both companies into eight chromatic groups exposes in a first regard repetitive standards in colour classification. However, in the further course of our analysis, we could identify more subtle differences that constitute a clear divergence in the way of classifying colours.

While we find a common general pattern of classification in both tools that we designate “standard pattern” for the sake of this analysis, the colour fields within each chromatic group are of different sizes.

4.1 Case study of the chromatic group of yellows

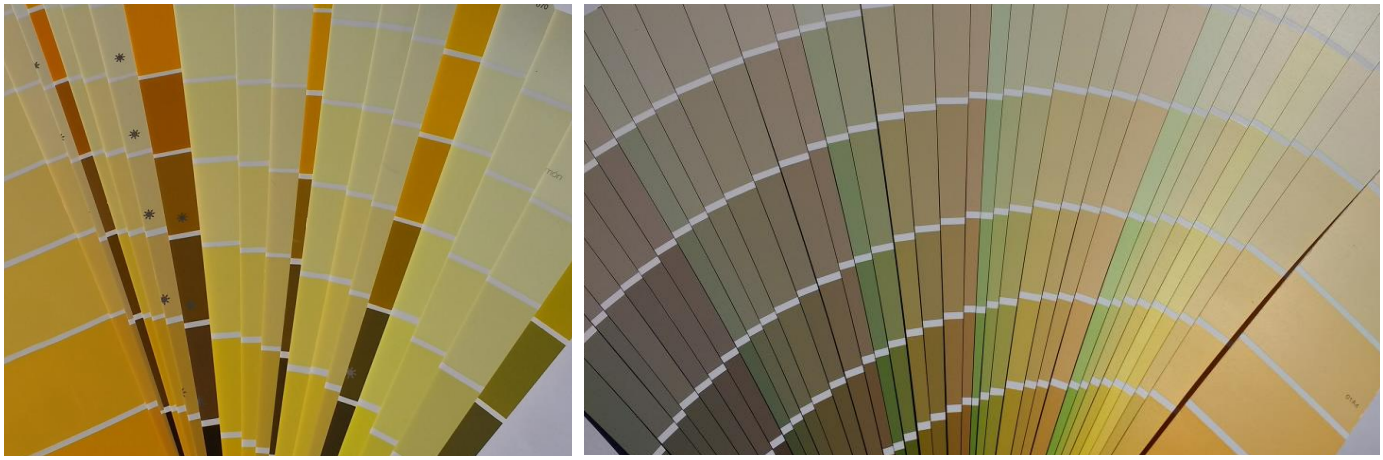
From figure 1 we pick as an example the chromatic group of yellows. In our visible spectrum, from shortest to longest wavelength, yellow (with a predominant wavelength of roughly 560–590 nm) is the colour between green and orange. When the three parameters of the colour differ (Hue Saturation Lightness, known as HSL), the shades of yellow show a chromatic group particularly fluctuating, which makes it transition into another chromatic group. We identify this situation in the NCS Colour Space where the yellow family is represented with the letter -Y but it is also possible to identify a letter-number combination -GY and -YR. This means the yellow is also part of the green (G) and red (R) colour family (hue).

In our experience as colourist designer, usually, when it comes to choosing a yellow in a colour palette, this chromatic group is typically the smallest one offered by the industry, probably due to yellow not being a very dominating colour, so that even moderate variations rapidly introduce ambiguous colours that tend to transition into other chromatic groups, e.g. we find a certain ambivalence between yellow-oranges and yellow-greens.

Rearranging shades of yellow from different chromatic groups, in both colour palettes we find multiple alternative classifications of yellows (see fig. 2).

In the NCS colour circle, Company A proposes a chromatic group composed of a range from -G70Y (70% of yellow and 30% of green) to -Y20R (colour with 80% of yellow and 20% of red), i.e. we find yellow colours that fluctuate between greens, and pure yellows up to oranges.

Company B, on the contrary, expands the spectrum and proposes a group ranging from -G40Y (40% of yellow and 60% of green) to -Y20R (80% of yellow and 20% of red). This example shows a significant reinterpretation by the creative actor of what we know as the traditional colour circle (see fig. 3).



Company A Company B

Figure 2 - Detail of chromatic group of yellows (company A (140 yellow colours) vs. company B (259 yellow colours))

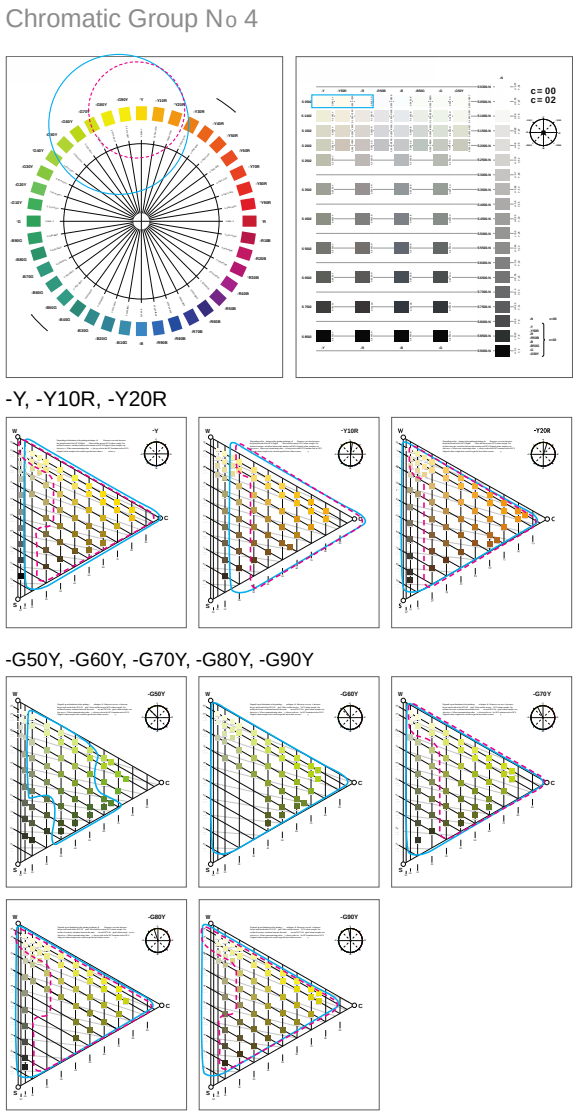


Figure 3 - Detail of chromatic group of yellows from company A vs company B situated inside the NCS Colour Space

The total difference in terms of quantity of colours between the two palettes to the other one is less than 250 colours (~17%). In the group of yellows from the fan deck of company A, we find a hundred and forty (140, ~10% of the total number of colours) colours and two hundred fifty-nine (259, ~16 % of the total number of colours) colours in the fan deck of company B, a significant difference both in total and with respect to the size of the respective fan deck.

The way of classifying the colours of the yellow group in the fan deck of Company A, exposes a research of the colour quality in a quite specific and what appears to be deliberately limited way.

Yellow tones (~52%) show only subtle variations towards the orange (~34%) and the green shades (~14%) and the dominant colours in the group are light and pale colours (high lightness and medium and low saturation). This classification appears to work in the market and provides also a basis to rationalise the selection of a particular set of colour choices. The way colours are thought here is completely objective. Its attributes seem to be based on cultural considerations (Madden, T., et al., 2000). We feel a strong relation between the territory and the need to simplify the parameters of the palette to render it as a whole more accessible and to simplify its communication.

Considering the fan deck of Company B, we notice that, as a colour expert from the field of applied arts, the colourist designer explores every possibility that helps to enrich and explore every shade of the colour group. This becomes evident not only by the classification of colours

according to their standard parameters (HSL), but also by the visible impact of artistic sensitivity and imagination. Yellow tones (~43%) in this group are more varied, alternating yellow greenish tones (~46%) and yellow orange tones (~11%), showing and further exploring the characteristic vivid, dynamic influence of yellow.

However, colour as an objective entity, conceived to be part of an industrial system, plays an important role in the act of classifying colours from an artistic expertise. Inside a normative sector, the sensible perspective of the colourist designer is nourished by a multitude of stories, dreams and experiences, always keeping in mind that the focus in an industrial context lies almost always on proposing a common model for everyone to render colour communication easier and neutral.

The case study of the chromatic group of yellows exposes two of so many different existing possibilities of seeing and associating colours. This case study, however, is only a first step and is followed by an analysis of the process of naming and codifying every colour.

5. Naming colours

For the two analysed colour palettes, both companies have developed their own colour classification systems instead of adopting an existing standard proposed by companies specialised in the design of colour communication tools.

The relationship between colours and language was important for both creative processes. This relationship has been questioned from different domains of research. For example, the anthropological method, *Basic Colour Terms* (1969), where the authors Brent Berlin and Paul Kay (Berlin, B., Kay, P., 1999) state that there are 11 fundamental colour terms that exist in every culture: white, black, red, green, yellow, blue, brown, purple, pink, orange and grey. This model, formalised solely based on language, has generated a controversial debate in the colour research community. In our particular case, comparing the chromatic groups identified in our study with the eleven “basic colour terms”, we see a great deal of agreement, but also differences, providing an example of how a specific creative and cultural environment generates a specific narrative, expressed by a specific set of colour terms.

The direction we have identified in the corpus of the two colour palettes analysed from a linguistic point of view (Berlin, B., Kay, P., 1999) reduces the 11 basic colour terms in the fan deck A to six basic colour terms (reds, oranges, yellows, greens, blues, purples) and in the second one (fan deck B) to seven basic colour terms (whites, reds, oranges, yellows, greens, blues, purples) (see fig.4). However, we could easily recognise the 11 basic colour terms inside every chromatic group of both fan decks. Is this configuration of having only 8 chromatic groups specific to the terrain of the paint and coatings industry? Would it be possible for the industry to create its own ‘universal’ classification without taking into account the culture of the consumer?

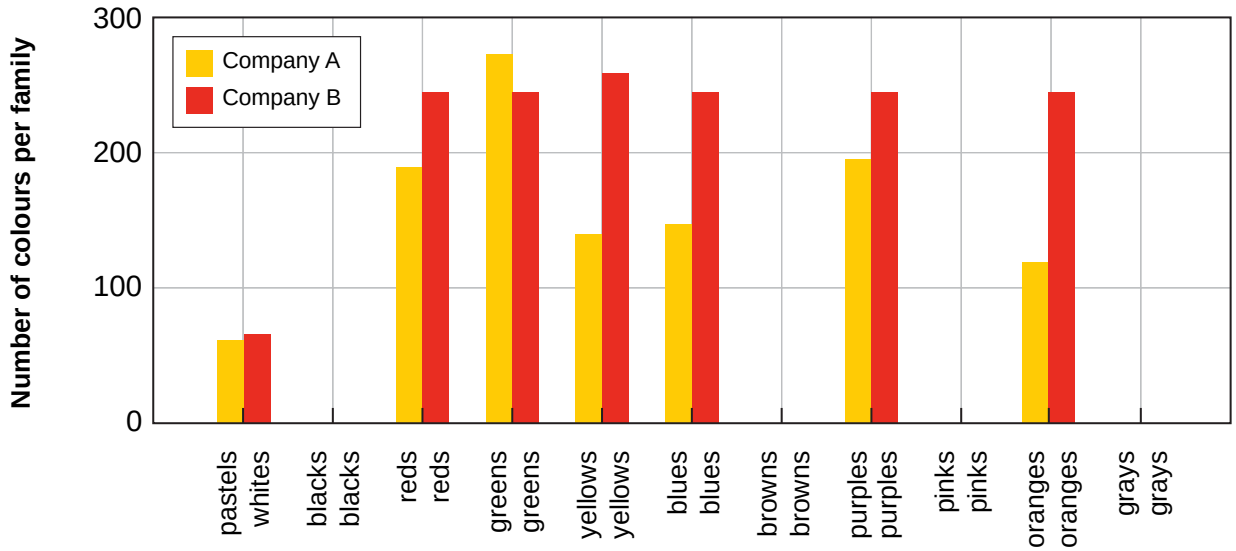


Figure 4 - Number of colours per chromatic group based on Basic Colour Terms.

Company A (Latin America) marketing expertise	Company B (Europe) colour design expertise
Rayo de Sol AM005 – T 41N – 48 – 100T	01A5
Oro Azteca AM006 – D 41N – 65 – 100D	01A6
Hojas de Oro AM007 – D 45N – 75 – 100D	01A7

Table 2 - Example of naming colours in the yellow group

Returning to our case study of the group of yellows, studying the colour codification helped us as well to identify how the same colour assumes different identities in different terrains. In tab. 2 we show three examples of very similar colours (mapped to the NCS) and their respective codes in both fan decks.

For the company A, proposing three different codifications for each colour, answering to three different user groups, shows the diversity of the tool in terms of fulfilling its primary function.

A strong, threefold colour identity is build, providing a guide to the imagination of the user. As such, it appears that colour is thought of as rather objective entity, even if a descriptive code is proposed, introducing poetic aspects. For company B, we are confronted with a numerical code system, structuring the tool in a rigorous, however easily accessible manner. Colour is approached from a rather subjective perspective.

We make the hypothesis that omitting a descriptive code implies putting fewer constraints on the imagination of the user of the tool. This is directly related to an aspect of great interest in the field of poietics, the possibility to free up the imaginary by artistic means in an industrial context, in contrast to marketing-centered approaches and their inherent tendency to strongly constrain the imaginary (Lecerf, 2014).

Finally, questioning the organisation of colour in lexical terms involves thinking of the existence of multiple ways of conceiving colour. Naming colours in the industry implies a reflection between linguistic norms and colour sensitivity so it can be applied to form chromatic groups. So, the question that remains open in relation to our own expertise is: can we propose new meaningful ways of classifying and naming colours that open up the imaginary?

6. Discussion and further research

The paint and coatings industry, according to the results of our analysis, offers a promising field of investigation for the colourist designer questioning creative processes in the invention of colour.

Based on the framework of action research in arts and adopting creative methods from the field of poietics, even if the results of this study indicates that further insights (such as comparing in a more measurable manner the speed or duration spent on determining each chromatic group of each fan deck which could help us to identify possible mistakes or miscommunications during the creative processes), could be gained by closer In-situ examination of the creative process of each actor. Analysing two different sets of expertise and the colour communication tools resulting from their application has allowed us to gain a deeper understanding of the role our field of research as colourist designer can play in this context.

We identified distinctly different creative approaches of the involved actors, intimately linked to their expertise and artistic priorities. Without the necessity of judging the quality of a particular tool our work clearly exposes how the artistic sensibility of each actor permeates and becomes apparent in the details of a tool designed in both cases primarily for purely commercial purposes, widening our perspective as colourist designers.

Based on this analysis and our ongoing exchange with key actors, we can state that our study about colour classification and nomination inside the industry is a first

approach towards a new definition of the meaning of a chromatic group in an industrial context today.

As a further extension of our work, it would also be interesting to bring together the colour charts that both companies have produced over the last two decades. The gathering of these tools could allow us to identify the colours belonging to each chromatic group to be able to build a chromatic circle specific to the context of the decorative painting industry in the 21st century. The resulting circle could be used to make comparisons with the chromatic circles proposed in the past, but it could above all become a representative object not only of the considered industries but of the chromatic identities of the corresponding territories.

According to a study by Borstein (1973), in South America, 9 of the 12 Indian cultures considered used one word for both green and blue. It would be interesting to perform a deeper analysis of the way in which Company A develops colour names and codes, considering that with exception of the group of neutral-earthy colours, the greens are the largest group, covering colorimetric values from two different colour families according to NCS.

Furthermore, important structural questions remain open when it comes to colour invention in the industry. Does more potential lie in proposing new methods for the creative individual, playing such a dominant role today? Or does it lie in creating new models of interaction between key actors providing different sets of expertise to enrich and widen the diversity of the artistic process? These questions, among others, will guide our future research efforts.

7. Conflict of interest declaration

The author declares that nothing has affected her objectivity or independence in the production of this work. The author has no financial interest in the people, topics or companies mentioned this article. So, no conflict of interest exists.

8. Funding source declaration

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10. Short biography of the author(s)

Lina Perdomo - is a colourist designer and PhD candidate at the University Toulouse Jean Jaurès in Toulouse, France. Her research is focused on creative colour development processes in an industrial context from the perspective of the colourist designer applying the approach of poietics and action research.

Notes

[1] Three main groups of customers have been identified: 1) the one who is afraid of too much colour and who therefore prefers to stay in the areas of light colours (pastels), 2) the one who has a favourite colour, so he must be guided in his specific chromatic group and finally 3) the one who likes colours but does not like taking risks so he prefers neutral-earthy colours.

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