

The SICO Color Naming Project: Forging Ties Between Educators and Industry

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Abstract: *How can interior design educators develop closer ties to industry? How do we develop mutually beneficial relationships, which respect the integrity of academic intellectual freedom and contribute to the development of disciplinary knowledge while providing useful services to industries competing in a market-driven economy?*

The SICO Color Naming Project was a successful university-industry collaboration that used design knowledge and methods as the basis for an innovative, result-driven process. It explains how an industry need led to the development of a new way to name colours, and how colour affectivity played a key role in the project, providing a catalyst for the naming process. During this process, a multidisciplinary team worked together to develop a novel framework for designing coherent, structured, and emotionally resonant links between colours and names.

This paper describes the phenomenologically grounded strategy used to manage the design process and guide the team through the naming of 2400 colours in two languages.

Keywords: *colour affectivity, phenomenological research, colour research.*

Introduction

Interior design education often seems separate from industrial practice and its real-world cycles of research, development, and implementation. Here in Canada, a distinct line exists between industrial and educational institutions. This creates a gap between academic research initiatives and industry-led projects integrating innovative design thinking. However, given the status of design as a professional, practice-based discipline, it is important that educators ensure that this gap does not become too wide. Teachers need to stay abreast of trends and tendencies and students must acquire the skills and expertise that will allow them to succeed professionally, while industries would do well to recognise that design schools are hotbeds of creative, multidisciplinary thought. There is room to work together to the mutual benefit of education and industry alike.

This paper describes the design methods and strategies used in the SICO Color Naming Project, an academic-led design project carried out at the University of Montreal, which successfully created names for the 2400 colours comprising the new product line of SICO, a major Canadian paint manufacturing company.

Practice-based research

The SICO Color Naming Project is an example of what Zmud (1998) calls ‘practice-based research.’ In such projects, the context of intervention drives the activity, while the methodology emerges during the course of the project. This is a common form of research in contexts of sponsored research: the goals are frequently diffuse at the beginning of the project, and several steps of negotiation are required to define aims and methods before entering into production.

<p>Practice-driven</p> <ul style="list-style-type: none">• topic defined by sponsors• end-point is a ‘moving target’• framed by nature of phenomena• designed jointly by researcher and sponsor
<p>Researcher-driven</p> <ul style="list-style-type: none">• topic defined by researchers• end-point is initially known• framed by a research model• designed by researcher

*Table 1: Practice-driven research vs. researcher-driven research
(adapted from Zmud, 1998).*

Such projects are also exemplary of what Buchanan (1996) and Rittel & Webber (1973) refer to as ‘wicked problems’; complex problems that resist reductive approaches. Two relevant characteristics of such projects are that they are *unique* – which is to say that specific contexts must be addressed on their own terms – and that they have *no definite formation*, which is to say that the formulation of the problem makes up a significant part of the project (Kimbell & Perry, 2001).

Thus, in the SICO Color Naming Project, the results had to satisfy certain project constraints defined by the client in response to the specific corporate history, socio-cultural context, and business climate. These constraints were site-specific and not readily generalised. Likewise, neither the extent of the mandate nor the scope of the project were clearly defined or understood at the outset. However, the core issue itself – the relationship between colours and names – is of more universal interest, just as there are elements in the process and method used for this project which speak to more widespread design concerns.

Colour theory and colour names

No one has to tell you what you're seeing or how you're feeling as you sit in the glow of a late summer sunset. But how would you describe the pink of that sky? Dazzling? Fleshy? Glistening? Iridescent? (Herman Miller, 2001, p. 1).

Colour theory and colour use have been extensively explored in interior design and other design disciplines (for example, Pile, 1997; Birren, 1978). Less understood is the relationship of colours to the names now commonly used to identify them. While designers and colour professionals tend to specify paints by manufacturer and product number, colour names are a well-accepted tool in the paint retail business, and are deeply enmeshed in the cycles determining national and international colour trends. In North America, the complex evolution of these trends involve many factors, including both deliberate top-down actions of industrially affiliated institutions like the influential Color Marketing Group and the organic bottom-up actions of individual purchases that represent consumer choices.

The exact role of colour names within this cycle is uncertain. There appear to be no publicly available systematic studies explaining the psychological impact of colour names on the consumer, and fewer studies explaining the influence of names on the experience of interior spaces. Colour choices are made daily by people, but not entirely rationally; colour is emotionally affective at a pre-conscious or unconscious level (Birren, 1978).

The SICO Color Naming Project took as a basic premise that an affective response is created through the linkage of colours and words. Naming colours creates curious, often poetic relationships between sensory experience and mental imagery. The relationship of colours and names can be seen as analogous to Barthes' (1977) description of the role that a caption plays in conjunction with a photograph. A photograph exists as a field of potential that the caption anchors, reducing it to a single state. Giving names to colours is thus a creative act that simultaneously reveals and creates a relationship that can be straightforward, surprising, playful, delightful or mysterious. As a tool in interior design, colour names can evoke a mood or feeling, a sense of space, or a time and place.

The case study

SICO is one of Canada's largest paint manufacturers. Already established in Quebec and Eastern Canada, the company is currently enjoying a period of strong growth and expansion into new Canadian markets. A significant portion of current product sales are within French-speaking communities.

In 2002, interior design faculty member Dr. Tiiu Poldma, from the University of Montreal, contacted SICO for assistance with a scholarship program. This request had an unexpected result: in subsequent conversations with the company, it became clear that they were deciding how to best address a design concern. The 2400 colours of their new product line had to be named, and the launch date was rapidly approaching. This offered an intriguing opportunity for interior design educators to engage with a very familiar material – paint – in a most unfamiliar way.

Establishing the relationship: the initial meeting

The client relationship was built in stages. The first step was to demonstrate that design knowledge and design methods (and more particularly those of interior design) would provide appropriate tools with which to address the design problem. Thus, in September of 2002, with initial financing from the company, Dr. Poldma, assisted by graduate student Hans Samuelson, assembled a multidisciplinary team consisting of professional interior and industrial designers, artists, colour specialists, and graduate design students. This team joined the client's marketing department for an intense one-day brainstorming session during which the participants familiarised themselves with the parameters of the design problem and with the company's vision and goals in order to establish the brief for the project.

The client's initial presentation of the project context provided the team with the broad outline of the project, the corporate context and history of the company, and details on the existing client base and plans for growth. The team then proceeded with the brainstorming session, first splitting into smaller groups to discuss the different aspects of the problem, then coming together to review the ideas, following the method detailed by Jones (1992). The multidisciplinary composition and diversity of viewpoints of the team proved invaluable in this process.

A number of possible strategies were spontaneously developed during this initial phase, and the group proceeded to analyse and evaluate the most valuable ideas. Potential concepts, strategies, and possible subjects for naming the categories emerged for future development. In particular, the conceptual idea of naming the colours for emotional affectivity was identified as the overarching principle which would guide the process as a whole, while the basic marketing tool, a 'paint chip' with eight gradations of a particular colour, emerged as the a primary physical constraint.

In the space of only a few hours, using only paper and markers, the team laid the groundwork for a project methodology that would soon guide a year of work. Furthermore,

trust and confidence in the academic-led design team was established through this first intensive work session, since the participation and presence of the marketing team and other company representatives validated the work of the designers. As a result, the marketing group agreed that the University design team should proceed with a second brainstorming session to further refine the concept and come up with a strategy for generating names.

The initial design phase

A follow-up brainstorming session involving only the University of Montreal design team took place one month later, in November of 2003. This phase of the project focused on the development of a workable strategy for the project as a whole. The group was modified slightly to include:

- Dr. Poldma, an interior design professor-practitioner with expertise in the use of colour in interior design;
- Hans Samuelson, a masters student in the Design and Complexity program at the School of Industrial Design;
- Vincent Bédard and Lora Di Fabio, colour experts from the industrial design profession; and
- Denyse Roy, an industrial design professor specialising in textiles and colours.

Of this group, three were females aged 35–50 and two were males aged 25–45, from variously anglophone and francophone backgrounds, ensuring a balance of gender and linguistic sensibilities. Changing the composition of the team also ensured a fresh perspective on the project and provided a balance between objectivity and continuity.

The concept developed through an intensely focused reflection on the creation of affective linguistic meanings, how words should and could be grouped together, and what ‘glue’ could be used to create a coherent program that would work with the entire palette of 2400 colours. This discussion revealed the following key design parameters:

(a) Information design:

- the basic unit for presentation was a ‘paint chip’ containing eight gradations of one basic color with increasing density;
- this unit had to be respected and would remain the main marketing tool; it could not be revised or altered;

- names had to be short (for printing purposes) and could not repeat names from the past two series of client colours;
- the colours were already established and could not be altered;
- paint chips should be treated as units and given a thematic continuity.

(b) Affective design:

- emotional resonance was the main design objective, and would override purely logical considerations, though logic should also be respected;
- a range of rather contradictory themes were perceived as desirable: security and safety (in an unstable geopolitical climate); travel and adventure (especially in Italy and Mediterranean countries); domesticity (food, drink, home) ; exoticism and escape.

(c) Demographic:

- the company's market data suggested that the main target was women aged between 35–55;
- the Ontario market was targeted for growth and the Quebec market for maintenance, while other anglophone markets were also seen as important;
- the names would be expected to serve for approximately five years, and should not be too closely tied to ephemeral cultural phenomena.

The final key issue was language itself. In Quebec, local design interventions must often take into consideration what information designers call 'localisation,' the 'adaptation of a product to a target language and culture' in response to the 'difficulty of translating text from one language to another and conveying the original sense and content so that it is acceptable across cultures' (Perrault & Gregory, 2000, p. 234). This proved to be a constantly recurring theme throughout the design process, as the poetics and pragmatics of French and English are not identical, and balancing these sensibilities proved to be a major challenge.

These parameters guided the development of a phenomenologically-based method. The 2400 colours were already subdivided into 300 paint chips of 8 colours each. Based on the results of the two brainstorming sessions, the group made two key decisions. The first of these was that each paint chip would be treated as a family, and that all eight shades of the colour would be thematically linked. This represented a break from past practice, since in all other cases, individual colours appeared to have been named in isolation, resulting in extremely heterogeneous paint chips containing eight unrelated names.

The second decision was inspired by the philosopher Edmund Husserl's famous phenomenological maxim 'To the things themselves,' which involves '[C]onfronting the essence and content of a being itself, that which truly constitutes a thing in its own identity' (Seifert 1987, p. 13). It was determined that each set of colours would be approached as innocently and clearly as possible, and that the most striking or powerful colour from each family be allowed to reveal itself. This colour would then serve as the lead colour for that family. The process thus involved a subjective, perceptually determined selection of the dominant colour from the family, a validation of the selection with other members of the group to ensure some degree of objectivity, and a process of reflection in which a space was opened for the colour to evoke a resonance among members of the research team.

The following example, generated during the brainstorming session, illustrates the concept. In this case, the 'olive oil' colour was the lead colour that determined the theme for the entire family. The colours are challenging to reproduce in a medium other than the original paint.

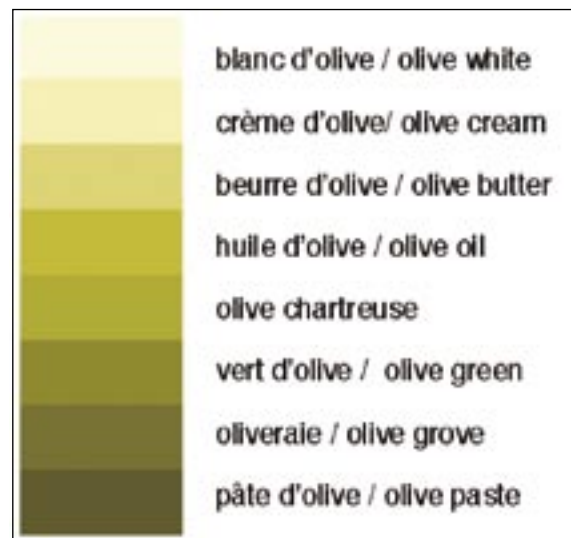


Figure 1: Sample of initial naming card with proposed names.

Once the concept had been put to the test, the team prepared to present the implementation strategies to the client. The initial brief called for the research team to name all 2400 colours. The second brainstorming session made it clear that for this to happen, many work sessions would be required. It was also evident that frequent reconfigurations of the team would be desirable, both to assure variety and to address an often difficult palette; shades of mauve, as it turns out, are particularly challenging to name, while multiple perspectives and changes in interpersonal dynamics would help to avoid creative blockages.

Approval of concept

The compiled results of these meetings were presented to the client in December of 2002, and proved compelling enough that the team was engaged to take the project through to production. A budget was established based on an initial estimate of 12 work sessions, assuming that approximately 200 names would be named at each session. The project plan was then formed, as shown in the following chart.

	client role	phase	design team	
preliminary development	client presentation	brainstorming	multidisciplinary team	concept
		development	core team	
	client evaluation	presentation	project leaders	
production		planning	project leaders	plan
		initialization	reconfigured team	
	occasional client participation	naming sessions	reconfigured team	
completion		revision	core team	strategy
	client approval	delivery	project leaders	
				process
				product

Table 2: Project plan.

Production

For the production phase, the University research team was reconfigured once again, and a specific strategy developed for the naming sessions. It was determined that the five original concept creators would be team leaders, and each work session would include at least two of these lead designers. Four other masters students and one translator-artist were added to the pool of participants from which teams were drawn.

Two work sessions were held each week, lasting three to four hours each time and composed of between four and seven team members including at least one female, one male, one native English speaker, and one native French speaker; the members representing a spectrum of ages. Individual styles and modes of working were accepted and woven into the design process. The mix of poetic, concrete, spontaneous and researched names was both accepted and encouraged. Individual team members would often arrive with possible themes, names and families of colours that they had come up with during the course of the week, as well as inspirational books and magazines.

Good food contributed to an amiable and supportive work environment. The lead in the setup of each work session was taken on by the authors. Initial sessions involved only members of the University team, but once the project was successfully underway and the session dynamics were well established, the client's marketing team was invited to participate in the naming sessions. This helped the client track the team's progress and created 'buy-in' with regard to both process and results.



Figure 2: The project under way.

It took 12 naming sessions to name the first 2100 colours; somewhat longer than originally estimated. This work was done from the beginning of March until the beginning of May, 2003. The client was kept informed of the process and approved the continuation of the work. Although the work seemed endless, in reality all 2400 names were named in 15 work sessions of 4–5 hours per session.

Validating the results

During the naming process work sessions, each group of names was validated by all group members for content, suitability, and English and French coherence; when each family was complete, it was read aloud and critiqued by the group, and then modified as required. At the end of the naming, one of the project leaders verified the naming for both content and translatability, with help from the translator in the group. Another colleague was asked to verify the French accuracy, while still another researcher looked through the entire project as a final assurance of quality control.

The project was handed over to SICO as a completed document in late June of 2003. At that point the client proceeded to fine-tune and test the names within their marketing department, resulting in modifications to approximately ten percent of the names. The product line was released in early spring of 2004.

Discussion

Design research and development at the academic level must seek to be rigorous and forward-looking, as well as sufficiently flexible and general that it can be adapted for use in a variety of contexts. But at the same time, sponsored projects tend to be highly contextually determined. The broader applicability and general lessons of such projects may well be the processes and methods employed, not the specific results.

The SICO Color Naming Project was a successful experimental project inspired and guided by phenomenological theory. Through a structured unveiling of the affective meanings connected to words, phrases, and colors, researchers were able to create a concept that remained spontaneous and productive throughout a long and challenging design process.

The client was directly engaged with the design process at all stages of the project, and developed a deeper understanding of the creativity and complexity of design thinking. When the project was handed over, the client tested the names and made modifications within the framework established by the process. This meant that the client appropriated both process and result, which will be valuable in the long-term viability of the approach.

Conclusion

The success of the project and the client acceptance of both process and product demonstrate the real potential of forging academic design links with industrial partners. The project demonstrated the benefits of design processes in generating methods and methodologies, explored the process of creating emotionally resonant names, and serves as

an example where designers successfully engaged with researchers and experts from diverse fields to create a research project of benefit to the interior design profession.

The SICO Color Naming Project demonstrates ways in which industrial practice can be informed by design theory. Furthermore, projects of this type can be used in undergraduate programs as models of interdisciplinary teamwork that also clearly show the pertinence, value, and widespread applicability of design theory. And finally, the project helped contribute to the corporate perception of design as a comprehensible and transparent process that is at once complex, challenging, time-consuming and rigorous. It is hoped that this will contribute to the disciplinary evolution of interior design, encouraging research and project development that will in turn lead toward increased rigour and enhanced relevance.

References

- Barthes, R. (1977). Heath, S. (Trans.). *Image-Music-Text*. London: Wm. Collins Sons & Co.
- Birren, F. (1978). *Color & Human Response : Aspects of Light & Color Bearing on the Reactions of Living Things and the Welfare of Human Beings*. New York: John Wiley & Sons.
- Buchanan, R. (1995). Wicked problems in design thinking. In Margolin, V. & Buchanan, R. (Eds.). *The Idea of Design*. Cambridge, MA: The MIT Press.
- Herman Miller. (2001). Experience of color. URL: http://www.hermanmiller.com/hm/content/research_summaries (accessed 10 June, 2004).
- Jones, J. (1992). *Design methods*. New York: John Wiley & Sons.
- Kimbell, R. & Perry, D. (2001). *Design and Technology in a Knowledge Economy*. London: Engineering Council.
- Perrault, A. & Gregory, V. (2000). Think global, act local: the challenges of taking the website global. *Inspel*, 34(3/4), 227–237.
- Rittel, H. & Webber, M. (1973). Dilemmas in a general theory of planning. *Policy Science*, 4, 155–169.
- Seifert, Josef (1987). *Back to Things in Themselves*. New York and London: Routledge & Kegan Paul.
- Wolf, B. Davis, M. & Vogel, C. (2002). Perspectives from inside the ivory tower. *Design Management Journal*, 13(2), 30–82.
- Zmud, R. W. (1998). Conducting and publishing practice-driven research. In Larsen, T. J., Levine, L. & DeGross, J. I. (Eds.). *Information Systems: Current Issues and Future Changes*. Laxenburg : International Federation of Information Processing.

