

THE SECOND C: COLOR WITH A PURPOSE

By Keith Hoover

The American Association of Textile Chemists and Colorists (AATCC) is an industry advocacy group focusing on the effective application of color and functional finishes on textiles. Textiles are used in many sectors including transportation, military/government, industrial, medical/healthcare, sports/fitness, and fashion, thus the business and end-use requirements vary widely. As we see rapid changes in global business, AATCC “continues to evolve to meet the needs of those in the ever-changing textile, apparel, and materials industries.” [1]

The textile, apparel, and materials industries are huge. The global apparel retail market drives about US\$1.8 trillion in revenue. [2] Textile mills and apparel factories create another US\$1.9 trillion in global revenue. [3] And these numbers grow every year.

The “Second C” in AATCC is for Colorists. This series of articles will deal with color in the apparel industry, focusing primarily on apparel brands, since that is where color specifications start. Additionally, we will see how practices emanating from brand color offices impact mills and garment factories.

The Purpose of the Second C

The Second C is a practical guide to assist colorists. The intention is not to present novel academic research or use big words. Rather, over the coming year, I will discuss my experience in commercial color management at several enterprise-level retailers and brands. The focus will be managing processes built around the Big Three—Light, Object, and Observer (or the LOO, as they will be called henceforth). All efforts to manage color, whether analog or digital, are built around the LOO since each of these three elements determines how (or if) we perceive color.

Over the coming year, I will discuss setting up a color process, digital versus visual assessment, color standards, choosing matching illuminants(s), Total Appearance (the impact of texture on a colored object), counting the cost versus value of color management, current and novel color technology, and do my best to either reinforce or skewer the conventional wisdom around color management.

The Purpose of Color

To start the series off, let’s talk about the purpose of a color department at an apparel brand. What does a color team do? Choose pretty colors? Reject labdips? Well, those are activities, but not a purpose.

Ronnier Luo points out, “In our industry, color is everything. It not only defines the product but creates a first impression of the selling space to the customer.” [4] As such, there are two aspects of color—inspiration and replication. In this article, we’ll cover inspiration—choosing the right color. In the next installment, we’ll review replication—producing finished goods that acceptably match the color standard and fastness requirements. Together, they assure that the product ends up the right color, which is the purpose of a color department.

What Drives the Brand?

Having the right skills for color inspiration and replication are very important. Before we dive into that, it is important to understand what drives the apparel brand. There are two types—Design-driven brands and Merch-driven brands. Essentially, Design-driven brands look forward and Merch-driven brands look backward. Design-driven brands are looking for newness—to present something different to the customer. Merch-driven brands focus on “giving the customers what they want” (or at least what they wanted, as shown by historical sales data). There is, of course, overlap between these

models. Nevertheless, one can figure out who is in control by determining whether the chief merchant or head of design is higher in the organization.

Both models are vestiges of slower design cycles in the past and carry risk to the business. If a Design-driven brand guesses wrong, then sales and margin suffer. However, if the sales trends that Merch-driven brands bet on fail to meet the forecast, then sales and margin suffer for them as well.

As it turns out, a new factor has emerged to supplant both Design and Merchandising as controlling factors—Sourcing-driven brands. It doesn't matter what the product looks like if the mills and garment factories can't meet the cost and timing targets (as is the case with current supply chain issues).

For at least 20 years, apparel brands have recognized that time is not their friend. For example, Target introduced their "Speed Is Life" mantra in 2002 in an effort to shorten the product development calendar. All brands have followed suit because they realized that it was not possible to forecast customer demand with calendars ranging from 9 to 18 months. This push to mitigate the risk of time on sales has been confused with "Fast Fashion"—that is, the push by some brands to forego design and just quickly copy products from conventional brands already in the marketplace. But that's another story. Suffice it to say that speed has become the most important factor driving success for apparel brands—and speed has a huge impact on the color process, whether in inspiration or replication.

The skills required for color inspiration and color replication are not the same. And, depending on the business model of the brand, the skills required for the inspiration phase may well be radically different. However, both phases are important. A running joke (albeit uncharitable) at a brand at which I once worked was that we had the best process for

replicating the world's ugliest colors. That won't do. So, let's take a look at the two processes.

Color Inspiration at a Design-Driven Brand

According to Yun Chen, choosing colors is like exploring a "lonely, uncharted wilderness." [5] It is up to a designer's talent and vision to select a collection of colors to represent the aesthetic of a design concept. Some designers see new colors clearly in their mind's eye and need a way to document them. Others go exploring in stores, galleries,



This textile series will share technical insights and wisdom of AATCC members. The "Second C" series will focus on color. If you wish to contribute your own technical insights on topics of interest to AATCC members, contact Communications Director, Maria Thiry; thiry@aatcc.org.

or anyplace likely to spark their imagination. They don't know what they want, but they'll "know it when they see it." [6]

In either case, color designers must rely on "found objects" to represent the colors that they want. This is no mean feat, since it is estimated that there are between 1.5 and 2 million distinguishable colors that can be represented on textiles. [7] Found objects fall into two classes: 1) color reference sets and 2) colors artifacts (also known as cuttings, swatches, etc.). [8] Color reference sets are large collections of colors (usually between 2,000 and 5,000 colors) marketed to support various segments within the design industry. They are set up on different substrates such as paper, plastic, or fabric, sometimes intended for use in specific processes like printed packaging. Some companies market the breadth of their collections while others claim to have the "right" colors, not the most colors.

Colorists at Design-driven brands point out three aesthetic weaknesses of color reference sets: first, everyone has access to them. A designer who wants an exclusive, "new" color is unlikely to look in a source marketed to the masses. Similarly, color reference sets are colors selected by someone else. Although color reference sets are sold as an aid to color selection, some see them as a crutch. And

finally, there are never enough colors in a color reference set. If it has 5,000, then sure enough, it needs 5,001 to meet a particular designer's need.

And then there are color artifacts—the cuttings that are the size of one's fingernail and the bane of a dyer's existence. The use of fabric cuttings continues to this day. Just like a betrothed at Filene's "Running of the Brides," searching for the perfect color involves the thrill of the hunt. One may have to dig deep to find the right swatch, but that is part of the exclusivity of the process.

Color Inspiration at a Merch-Driven Brand

If Design-driven color inspiration is taking Frost's "road less traveled," then the Merch-driven color inspiration process is traveling Interstate 5 from the San Bernardino Freeway to the San Gabriel River Freeway at 5:00pm—and loving it. Merch-driven colorists want to know the colors that are selling now. They look to trend reports and fashion hot spots around the world for information. In this sense, they are closely aligned with "Fast Fashion" in their effort to jump on the color bandwagon driven by someone else.

Some trend services claim to use AI technology to scrape color information from thousands of key fashion-related websites and provide up-to-the-minute, focused color forecasts. The validity of the color data used in this process may be subject to question, but the demand for such insight cannot be doubted. To streamline the process, color trend services link their forecasts to commercial color reference sets. Merch-driven brands are much more likely to rely on color reference sets and forbid the use of cuttings as color references.

In a sense, trend research can be like an echo chamber. Every garment that is included in a trend analysis was designed at least a year prior. And its design may have been based on trend research including garments produced another year back. So, in essence, a Merch-driven approach to fashion just keeps drinking its own spit.

From Inspiration to Replication

Regardless of the motivation, the colors selected to populate a color palette must be handed off for replication. As we move from the sacred to the profane (in a theological sense), the big question is whether or not color inspirations can be feasibly matched on



the intended materials. Indeed, color standards must be feasible in order to meet the purpose of color management—“assuring that the product ends up in the right color.” In the next installment, we’ll talk about this hand-off—and even integration—between color inspiration and replication.



References

1. <https://aatcc.org/about/>, “About AATCC”
2. Global Apparel in USD—Source: Statista July 2020 (Forecast adjusted for expected impact of COVID-19)
3. <https://shenglufashion.com/2018/12/18/market-size-of-the-global-textile-and-apparel-industry-2016-to-2021-2022/> (accessed November 2021)
4. Ming Ronnier Luo, Keith Hoover, Tinwei Huang, Jianlong Zhang, “LEDsimulator: The Colour Box,” SDC draft
5. Chen, Yun & Yu, Luwen & Westland, Stephen & Cheung, Vien. (2021). “Investigation of Designers’ Colour Selection Process,” *Colour Research & Application*. 46. 10.1002/col.22631.
6. Not unlike how Justice Potter Stewart described his ability to spot pornography—“I’ll know it when I see it,” *Jacobellis v. Ohio*, 378 U.S.184, 197 (1964)
7. Judd, D.B. and Wyszecki, G. (1975), *Color in Business, Science, and Industry*, John Wiley and Sons.
8. Onscreen color selection is a third path—with significant challenges. It will be covered in future segments.

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