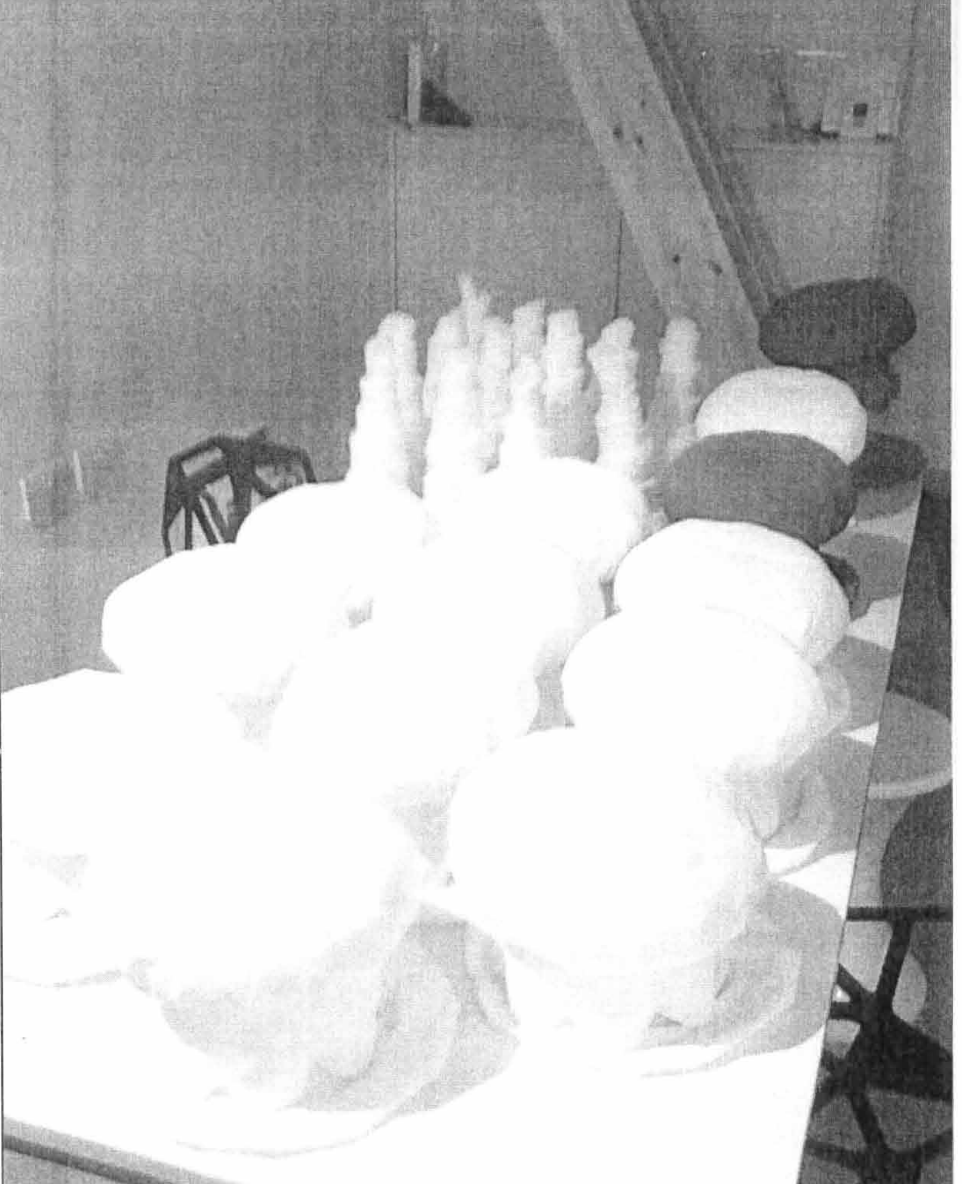

Breathing spot colour:

A Critical Making exploration of physical standards

ginger "all-lower-case" coons
Faculty of Information
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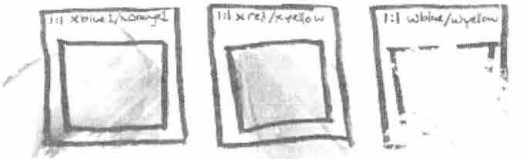


You've probably heard of Pantone. You may have seen a Pantone swatch on a mug or read news releases detailing Pantone's fashion colour forecast for the season. Pantone has become something of a lifestyle brand. But at its core, Pantone is a colour matching system used heavily in the printing and graphic design industries. Most printing (including the work done by your desktop inkjet) is done with a four-colour process. The four colours of ink – cyan, magenta, yellow and black – are applied to paper or another substrate. The inks work together to form almost any colour. That "almost" is the basis of Pantone's business. Pantone is a highly popular spot colour system. Spot colour fills the void left by "almost." In spot colour, a specific ink colour is mixed from a collection of pigments (more than the standard CMYK four) and is then applied. When you see a flourescent, a particularly convincing Caucasian skin tone or anything vivid in the red end of the spectrum, chances are good it's the work of spot colour.

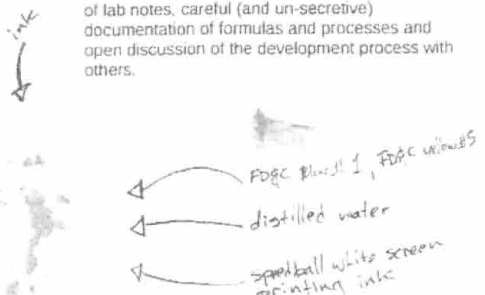
For two and a half years, I (often literally) breathed spot colour. I made a practice of studying spot colour because of a practical problem: there isn't good Pantone support in Free/Libre Open Source graphics software. The licenses are incompatible. So I opted to make my own standard. It was going to be called the Open Colour Standard and it was going to live up to its name. My intention was to create a well-documented, publicly-available, modifiable and freely-implementable spot colour standard. As a Critical Making (Ratto, 2011) project, it was meant to be an exploration of the standardization process almost more than it was intended to be usable. In effect, I tried, without the normal infrastructures and supports of institutionally-developed standards, to create a widely-usable and accessible standard for a physical system.

While the inspiration for OCS did lie in Free/Libre Open Source Software movements, the work involved in defining a physical colour standard is somewhat different from normal F/LOSS work. Where the usual work of F/LOSS, as implied by the second S, is in the development of software, the main body of development in the Open Colour Standard was focused on pigment solutions and mixes of those solutions with other materials to form inks.

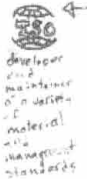
The workflow involved in the development of a physical standard is quite different from that (or those) involved in software development. First and most obviously, there is a far higher degree of materiality required in the development of an ink standard than in the development of a piece of software. A physical system requires physical development. Given that requirement, there is a different set of tools used. In software development, the bare minimum required is a computer with a text editing program and a compiler for the programming language being used, as well as a keyboard or other text input system. While different developers employ different workflows, these three things are the minimum required for modern programming.

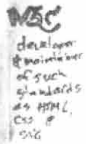
In the work of ink development, on the other hand, a far larger set of tools is required. Among that set: pigments; water; carrier medium; stabilizers and other chemicals (which are determined by the pigments and carrier mediums being used); mixing implements; containers; paper or other relevant substrates; measuring apparatus; etc. This list accounts for the bare minimum of necessary tools.

The process involved in the development of the Open Colour Standard was, from a perspective of materiality and tools, quite different from more usual F/LOSS development practices. It did follow F/LOSS principles in other significant ways. OCS adheres to ideals about documentation, attempting to keep as straightforward and imitable a practice as possible. This is an essential principal of F/LOSS, even if it isn't always followed in practice. In the case of Open Colour, the adherence to documentation is realized through rigorous taking of lab notes, careful (and un-secretive) documentation of formulas and processes and open discussion of the development process with others.



The hands-on work of OCS was meant to replicate the sort of process that might lead to the development of a physical, material standard. This experimental process largely followed basic laboratory methods, although from a self-reflective, critical perspective. In addition to the hands-on process, I used a mix of methods to conduct the research around OCS. I analyzed the guidelines of standards-setting organizations such as ISO (the International Organization for Standardization) and W3C (the World Wide Web Consortium), employing media analysis techniques (Berger, 1991). Looking at their own guidelines was an essential step in understanding how they expect their systems to work. I looked at how the documents are situated in the cultures of their making, how they impact their end users and how they represent the social and economic assumptions of their creators (ibid).





The bulk of my experimentation was with an aim towards developing a palette of screen printing colours. This experimentation was concurrent with my first reading of *Laboratory Life*. The influence of Latour and Woolgar at this time helped to grow a sense of self-consciousness in the documentation of the experimentation process. This self-consciousness resulted in the development of a form of meta-note taking, which attempted to take into account as many contributing factors as possible, from the tangential-but-relevant to the frankly odd. I took great pains to make clear, in the notes, my state of mind, factors which might

play into my performance (going so far as to record what music I was listening to at any given time, how I felt physically or how much caffeine I had consumed that day) and other items which may seem extraneous to the actual work of mixing colour.

In the development of Open Colour, I spent a great deal of time paying attention to my own actions, moods and quirks. There were two major reasons for this behaviour: first, after Bowker and Star, I was convinced that the process involved in the creation of a standard has a significant impact on the final form of the standard in the sense that it becomes "frozen organizational discourse" (1994); second, influenced by Latour and Woolgar, I was convinced that the process of doing work in a scientific or semi-scientific process involves a degree of flattening and simplification, turning reality into narrative (1979). I was set on avoiding that flattening.

In the development of standards and processes, the final product of method is meant to be generalizable and transferable. Because of this valuing of generality and portability, the final product must be divorced from the context of its process, even if that process is documented. While the importance of good documentation for reproducibility and transparency cannot be ignored, the process, which takes place in real time during the development of the product, has no way of standing on its own feet. Instead, the documentation, another product of the process, is the only thing explicitly recounting and recalling the process (although, of course, in its way, the final product must also embody the process of its production). The documentation exists not only for functional reasons like allowing reproduction and testing, but also to give context back to the ultimate product. By recounting the story of the process, it sheds additional light on the product. The problem, of course, is that documentation is representation. Representation, by definition, leaves things out.

Purely tangential, silly or arbitrary things do not often show up in final standards documents. They seem largely irrelevant to the actual deployment and adoption of the standard. Despite their seeming irrelevance, they tell a story about the in-built biases and reasons behind the standard. Surely the knowledge that certain decisions have been made purely out of convenience might colour the perception of the standard. This disclosure of methods could be the province of a document explaining the methods behind the work. However, if such a methods section exists at least in part to legitimate and back up the work being presented, then there is less reason to admit to arbitrary or silly decisions.

While work completed over the course of the Open Colour project is an attempt to get at a better understanding of the physical issues in the standards-setting process, it is not an accurate stand-in for the large scale, institutionalized instances of consensus-based standards-setting. My work has been a process of seeking out a better personal understanding through an individual enactment of activities geared towards the creation of a specific standard. I do believe that hands-on experimentation can indeed help to shed light on the issues underlying the decentralization of physical information. Such work can provide an insight into the processes and biases built into standards-setting, as well as the practical issues addressed and embodied in standards. This embodiment is key to a deeper personal understanding. The experience of setting baselines, of sourcing and imagining production chains, of attempting consistency can provide a wonderful contribution to thinking about the ways we structure our physical information systems. It lends a more contemplative element to the study of standards-setting, making it more viscerally real than a study focusing solely on document analysis or organizational structure and process. I feel that the element of embodied, personal understanding that comes with attempting to do the work of the standards-setting body contributes hugely to my personal understanding of the motivations behind the decisions made in the creation of physical standards.

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