This bulletin is a heavily reworked version of a chapter from Ryan Gander and Stuart Bailey's *Appendix Appendix* (Zurich: JRP Ringier, 2007), a book in the form of a proposal for a TV series. As yet unrealized, the series is comprised of 12 programs, each based on a topic germane to Ryan's wider art practice. The material here is assembled from the second program on color.

Like the rest of the book/series, it was liberally collaged from both the authors' own and others' writing and footage, often heavily paraphrased or edited. Roughly speaking, the individual "swatches" here were originally written by (in order of appearance): Ryan, Ben Watson and Esther Leslie (× 2), Liam Gillick, Stuart, Dmitri Siegel Ryan, Ryan, Bill Drummond, Vera Rule, Ryan, Richard Hamilton, and Ryan again. For the sake of convenience, however, the bulletin is attributed to a single pseudonymous writer who shows up elsewhere in Ryan's work. With thanks to all involved.

Cover: The first TV test screen was devised around 1934, about five years before the first televisions were made available to the public. It consisted of a simple pattern generated to test the equipment, which back then was of course only capable of transmitting in black and white. Today, there are endless varieties of such screens, but the closest to an internationally-accepted global standard for video is informally known as the "Sony test screen," although strangely enough it was not devised by Sony at all. Its technical name is the "SMPTE color bars test card" —a striking combination of maximum formal potential coupled with minimum content.

1.

A few months ago, a team of scientists at the National Physical Laboratory in Teddington produced the world's blackest black. It's hard to imagine, I know—like imagining what any brand new color would look like if only described in words. This superblack has been developed for use in the space exploration industry, specifically to coat the interior of the Hubble Space Telescope in order to make it more powerful. It results from a very lengthy chain of chemical processes involving nickel sulphate and sodium hypophosphite that produces a phosphorus coating, which is then etched with nitric acid to produce the superblack surface structure.

2.

In the black and white world of postwar Britain, it was color that made the *Beano* comic so attractive. Used sparingly to keep the price down, simple black-and-white alternated with black-and-orange-or-red-and-white. There was color for the front and back pages, and for the magnificent centerfold of "The Bash Street Kids." This demonstrated a certain pecking order: it was noticeable that the funnier strips with the stronger characters got the extra red, and everyone agreed that "The Bash Street Kids" were the comic's high point.

These comics emerged in an era before newspapers were printed in color, though by the 1960s there were glossy "Sunday supplements" with color photographs and advertisements featuring sexy models, cars, liquor and cigarettes — none of which were of interest to children. Bliss was a *Beano* and a packet of hi-color Refreshers, Opal Fruits, Wine Gums, or a handful of four-a-penny Fruit Salads. Back then, a child's pocket money purchased riches entirely unregistered by parents and older siblings. In this sense, *The Beano* provided the same kind of infantile pleasure as multicolored beads strung across a baby's pram. Shops tended to keep it at ground level — it could be located quickly even in an unfamiliar newsagent. The infant consumer pushed past grown-up legs to find the printed treasure, and its stories were duly told from the point of view of children continually at war with parents, teachers, and policemen.

3.

Print
fluorescent
here

In the 1930s, after one of them received a bonk on the head followed by a spell of recuperative ultraviolet treatment, two eager young experimenters, Bob and Joe Switzer, began mucking around with dyes and resins to make colors that would glow under this same light. The colors were unavoidably eye-catching because they shone so much brighter than others. It was as if a new part of the spectrum had been discovered.

Color arises in ordinary objects through selective absorption. Ordinary paint absorbs some of the spectrum from white light and reflects the rest. Red paint absorbs blue and yellow, resulting in the scattering back of only red. Day-Glo colors are composed of fluorescent materials. Day-Glo paints do not simply scatter back light from the visible part

of the spectrum; they can also take shorter wavelengths — usually ultraviolet — that are invisible to our eyes and re-emit the energy by converting it into photons of longer wavelengths. That is, ultraviolet light goes in, its energy is converted into visible light by the chemicals in the paint, and a bright fluorescent quality comes out. Fluorescent materials emit more red light than ordinary red objects, for example, since they take some of the ultraviolet light invisible to our eyes and emit it as visible light. Day-Glo lets more be seen; it shines brighter.

The name Day-Glo was trademarked in the 1950s, and in the late 1960s, the company formally changed its name from Switzer Bros Inc. to Day-Glo Color Corp. Vulgarity, cheapness and commercialism dogged Day-Glo's reputation, but its manufacturers' aspirations were sublime and limitless. The names the Switzers gave to their Color Corp's palette ring with the poetry of science, industry, and space exploration. The full, trademarked pigment set comprises Neon Red, Rocket Red, Fire Orange, Blaze Orange, Arc Yellow, Saturn Yellow, Signal Green, Horizon Blue, Aurora Pink, and Corona Magenta, while the product line is permeated by cosmic utopianism and love of the alien-sounding letter X: Starfire ... Filteray ... Velex ... Optex .... Each hue fizzes in its optical attack and saturating vision, alerting and soothing at once.

4.

I became interested in the idea that Coca-Cola possesses a very specific color: completely ubiquitous yet difficult to describe. "Brown" is about as close as you can get, yet even that seems wrong. Maybe it's even more black than brown. Though this is a bit like describing the sea as blue or green when it's actually transparent. Watery liquids

generally have a transparent quality, of course, so there will always be a mismatch when attempting to capture their color with some more solid liquid material like paint. And trying this from memory is even more dubious. Big brands acquire the aura of universal, abstract truth, and Coke, as we know, is the real thing.

5.

In April 1958, Yves Klein opened *Le Vide* (The Vacuum) at the Iris Clert Gallery in Paris. The show was a development of his conceptualization and subsequent dematerialization of the color blue. Visitors entered under a large blue canopy into the hallway of the house next door where they met two soldiers of the Republican Guard and were served a blue cocktail consisting of gin, Cointreau, and methylene blue. They were then admitted into the gallery space, which was completely empty, only the walls were covered in white pigment with a slight bluish tinge.

In 1960, Klein created and patented the ultramarine color known as International Klein Blue or IKB. He invented the paint with the help of chemists by suspending pure, dry pigment in crystal-clear synthetic resin and compatible solvents. Unlike traditional binders, the new colorless carrier did not dull the individual particles of pigment, but left them with their original brightness and intensity. The novel medium was versatile enough to be brushed, sprayed, rolled, or even thickened and built up on a surface. It quickly dried to a fragile-looking but durable matte finish that, like velvet, offered a plush light absorbency that seemed to dissolve into a dark, glowing liquid depth. (The "swatch" above is therefore merely one of many suggested CMYK translations of a color that naturally resists translation, specifically: Cyan 100%, Magenta 95%, Yellow 12%, Black 5%.)

Michel Ragon, a critic, wrote then: "If someone is desperate for an experience of this kind to be taken seriously, one must not start sticking Punch-and-Judy puppets from the Republican Guard at the door, you must not give the guests blue drinks and use the walls of a distinguished gallery for the sake of one's own fantastic mind. Yves Klein must choose between Dada and Zen. These are two mental and spiritual points of view that are poles apart."

6.

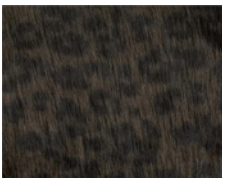
This portrait of Carol Hersee is perhaps the most widely broadcast image in the history of television. After first appearing in 1967 on BBC2, Carol showed up regularly at the end of the daily broadcast schedule to accompany the sleepless (or very patient) until programming resumed in the morning. The image is still in use in over 30 countries today, though since the advent of 24-hour programming her schedule has been drastically reduced.

The overall image is technically known as Test Card F and was designed by Carol's father George, an engineer for the BBC. George took some snapshots of his daughters Carol and Gillian for a mock-up of the new design, and chose this one of Carol to demonstrate to BBC2 management that a test card featuring a picture of a person would be the most useful graphic for adjusting the color performance of the channel's cameras and monitors. Management concurred, but also decided that replacing the little girl in the mock-up with an adult model would mean risking that the card would require costly updates to conform to the ongoing whims of grown-up fashion. So, Carole was brought in for a proper photo shoot and the now famous photograph was taken.

Each of the props surrounding Carole that day served a technical purpose. The chalk cross was positioned on the chalkboard to help engineers locate the center of the picture, for example. Mr. Hersee once admitted that the BBC considered using a South Asian model with a bindi forehead marking for this purpose; apparently, the white cross on its black background proved more versatile. Since white images on television are made up of overlapping red, green, and blue, poor convergence of these colors shows up as "color fringing" on the cross.

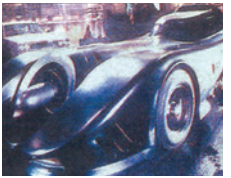
Even the somewhat unsettling clown has a purpose. Color televisions filter red, green, and blue signals from the black-and-white ones and decode them separately. This process causes the color signals to be delayed. If the black and white signals are not properly held back as well, a television suffers what is called a chrominance/luminance delay error. This causes the yellow of the clown's buttons to jump to the right, leaving the buttons themselves plain white.

7.



The phrase "a leopard never changes his spots" is a double misnomer. Firstly, the markings on a leopard aren't spots at all, they're "rosettes," and secondly, in the City Zoo of Amsterdam you'll find a *Panthera Pardus*, more commonly known as a Black Leopard, whose rosettes are in fact constantly changing. The Black Leopard, a sleek, short-haired creature, is a very rare animal, lacking the usual pigmentation of his species. As he sadly paces up and down his cage, the sun occasionally catches his coat to reveal the close-set rosettes rendered in two slightly different lengths of hair.

8.





Some rushes of color in the movies, from left to right and top to bottom:

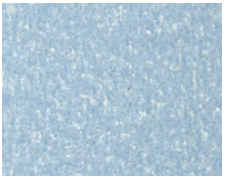
(1) Miloš Forman's *Amadeus* uses a pale palette for snow, powdered wigs, blanched clothes, lead make-up and quicklime for Mozart's grave, plus white candles in the only dark scene — the composing of the *Requiem Mass*. Forman meant the white to convey ideas about purity, coldness, heavenliness, and unreality. (2) *Batman* is Tim Burton's formal exercise in *grisaille* — art in grey only. It's more depressing than actual black-and-white with noirish lighting could ever have been, and more sculptural than a pen-and-ink strip cartoon. Likewise, in David Fincher's *Se7en*, the urban-dereliction color range of grey and hot-shit browns is shot through with flashes of very nasty yellow, which makes the audience feel unclean and very tense. (3) In *The Godfather* parts I and II, Francis Ford Coppola underlit each scene in the first film,

and used a tint for flashbacks in the second. The prints were shot in a film that permitted dark browns to register separately from blacks, so the Corleone world could be shown as darkly Rembrandtesque and quite isolated from ordinary America, represented by, say, a bright blue car arriving at the mafia headquarters.

(4) Director Victor Fleming's *Gone With the Wind* is powerfully ruddy: even Atlanta's street dust is ruddled, and Scarlett faints on a red carpet. Red is an alarm signal in Michael Powell's *The Red Shoes* and in Nic Roeg's *Don't Look Now*, in which the lost child's arterial-red coat is like a bloodstain that can't be scrubbed out. (5) Akira Kurosawa's *Kagemusha* uses orange, which in Japan has a range of powerful emotional associations. Characters fighting in the civil wars wear autumnal russets and tawnies for the ending of a way of life, chrome-orange dawn lights the new era, and there are smoky bitter oranges for the battle banners and armor. (6) In *McCabe and Mrs Miller*, director Robert Altman flashed the film stock — meaning he exposed it to low-grade light — to suffuse it with a golden nostalgia that the movie otherwise mocked. David Lean's *Lawrence of Arabia* would have seemed crueller and madder if the desert had been red laterite dust.

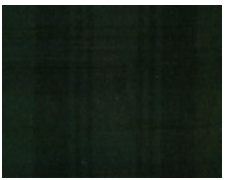
(7) John Boorman's Amazonian epic *The Emerald Forest* is Technicolor with added chlorophyll. In Werner Herzog's *Aguirre: The Wrath of God*, the jungle is colored in black and green, just as threatening as military camouflage. Green is also the crucial color in *The Wizard of Oz*: the greenness of Technicolor Oz is what makes them say "We're not in Kansas anymore" after the arid opening sequences in sepia. (8) Finally, Terrence Malick shot *Days of Heaven* at twilight when the sky, underexposed in the last of the sun, appears a deep color of the Virgin Mary's robe — the most heavenly skies on film. The characters are clothed in indigo, the color of honest workwear in the West. Not an easy color to film, and associated by audiences with the "blue spill" lines — the byproducts of special effects using blue screen processes.

9.



"Blue Wall" is a printer's trade term for a certain kind of paper used to fly-post on the street. The front side — on which the image is printed — has a slightly shiny appearance and is water resistant to survive bad weather conditions. The back side is porous to allow the paste to soak in and adhere to the wall. The reverse is also sprayed with a blue ink wash. This is because most posters are posted over many other posters that build up on street hoardings, and often the one underneath can still be seen through the one on top. This must mean, surprisingly, that it's more economical to spray a wash of blue ink on the back of the poster paper than it is to print the posters on thicker stock.

10.



In 1739, the 42nd Royal Highland regiment was formed with the purpose of policing and keeping the peace in the troubled and barbaric highlands of Scotland. A thousand men were assembled for the first time on the banks of the River Tay in Aberfeldy, outfitted in new uniforms. The uniform included a kilt made from a new military tartan that, compared with the regular scarlet kilts of most other regiments, was unusually dark. It was comprised of half pure black wool and half a mix of black wool and black silk that on first glance appeared jet black, the tartan patterning

only revealed when the fabric caught the light at certain angles. One of the regular duties of the 42nd Royal Highland regiment was to patrol fortifications during the night, and this tartan was specifically designed to camouflage the soldiers in such conditions. Over time, the regiment came to be known as *Freiceadan Dudh* or "The Black Watch."

11.



I suppose that I am much more concerned with ideas about paint than with paint for its own sake, or even a subject for its own sake. My reason for becoming involved with Bing Crosby in the negative color painting, *I'm Dreaming of a White Christmas,* was not nostalgic affection for Bing Crosby films, rather that the painting was quite demanding technically while also offering some metaphysical exploitation. It follows from a Duchampian idea about everything having an opposite. Scientific thought is now being directed at the notion that every particle has a negative particle partner and that a non-world exists adjacent to our world; that this world has as real an existence, in an opposite phase, as the one we experience. It's nice to be able to see a ready-made token of that reversal of our normal perception in the form of a photographic negative.

The painting of a negative color frame from a Bing Crosby film can take us a little closer, in a symbolic way, to that looking-glass world. The idea that Bing in negative becomes racially reversed is amusing, too — the song from the film makes an apt title for the painting — he becomes an American Negro. His clothes, color reversed, are more bizarre; he wears a black shirt and white hat, a yellow cardigan and a light blue coat — unlikely for Bing. The change is such that we think of him as a much more racy figure than the one we know. The exterior

seen through a window is lurid, too, the otherwise blue sky is orange, the green trees, red. This is disturbing but not surrealistic. In many ways, the scene becomes that much more magical and mysterious and beautiful and rewarding than the scene as we know it.

12.

The architect Le Corbusier had a specific palette of colors that he used on a number of occasions to decorate the interiors of his buildings.

This palette — evident on the interior of Le Corbusier's *Pavillon de l'Esprit Nouveau* in Bologna, for example — was comprised of eleven colors that have been described as "broken," being "of nature." They were only ever used inside the buildings, in each case chosen to reflect their surroundings — stone, earth, sky, and so on — in marked contrast to the exteriors of most of Le Corbusier's buildings, the so-called neutrality of which were typically manifest in pure white or raw concrete.

Early one spring morning while sitting on the steps of one of these buildings in the *Pavillon* talking with the caretaker, I off-handedly referred to the color scheme as Corbusier's "intellectual colors." As far as I'm aware there's no previous record of the colors being so named, but since having continued to use the phrase with matter-of-fact authority during the construction of an installation in the space, the name seems to have stuck. Le Corbusier himself believed greatly in the suggestive force of words: "once one has clearly named the color," he said, "one can speak of a certain red with the same exactness as one would of the A of a tuning-fork."

For reference, Corbusier's intellectual colors remain: a light pink (Pantone 468U); a mid pink (Pantone 728U); a dark pink (Pantone 471U); a light grey (Pantone 429U); a dark grey (Pantone 1817U); a mid brown (Pantone 432U); a dark brown (Pantone black 5U); a light blue (Pantone 549U); a mid green (Pantone 577U); a 100% black; and, of course, a pure white.

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