

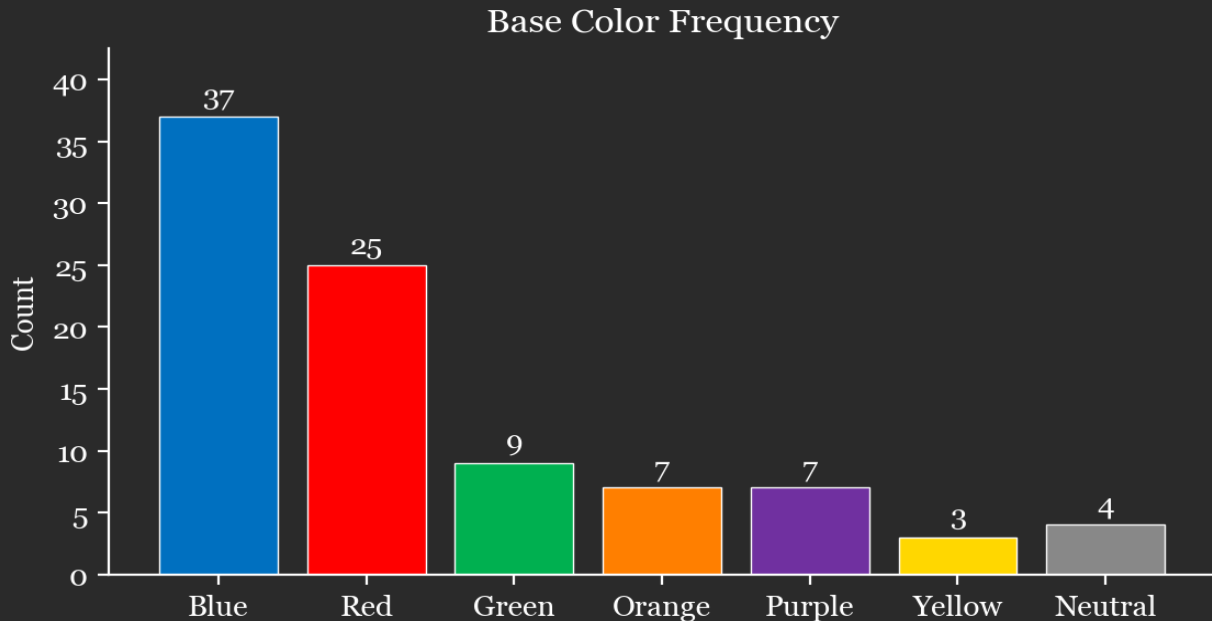
Color Pairings in American Sports

Context

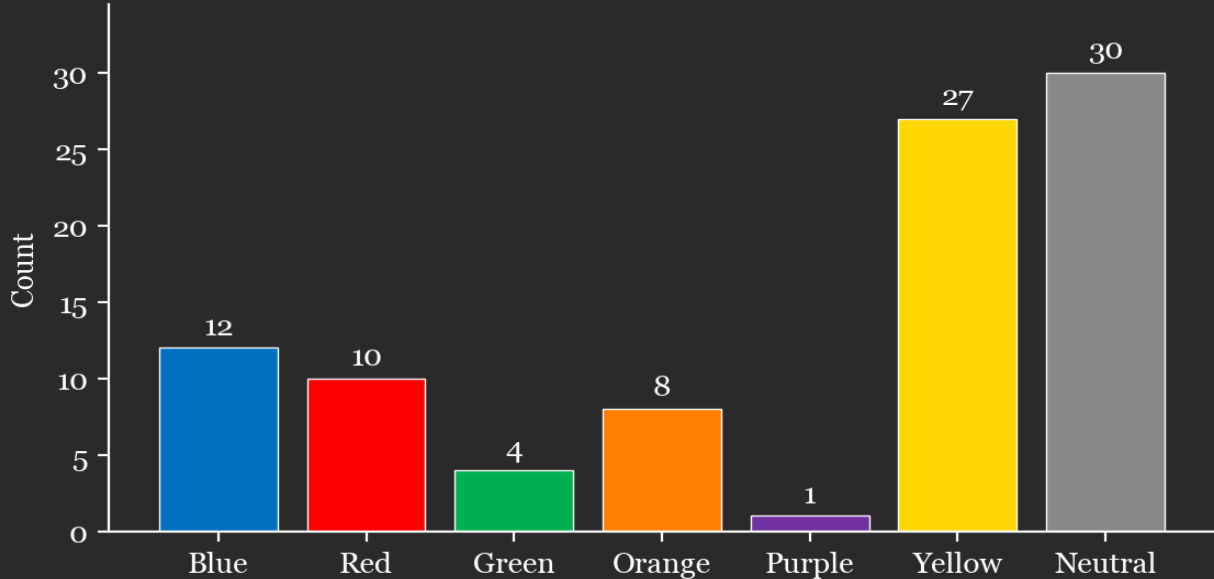
I was interested in learning which colors are most likely to appear together within the visual culture of American professional sports. I conducted an analysis of the team colors of 92 franchises across the three largest American leagues: Major League Baseball, the National Basketball Association, and the National Football League. I limited the analysis to seven colors: the six primary and secondary hues, translating any other color to its nearest analog, plus neutrals (black, white, and gray collapsed to a single category). Each team was assigned exactly two colors, a base and an accent.

Individual Colors

The most common base color is blue (40 percent), followed by red, green, orange, purple, neutral, and finally yellow at 3 percent. The accent picture inverts the bottom of that ranking. Neutral leads accent colors at 33 percent, followed by yellow at 29 percent. Despite being the rarest base color, yellow is by far the most common chromatic accent. Yellow trades places with blue depending on whether you are asking what color owns the field or what color punctuates it.



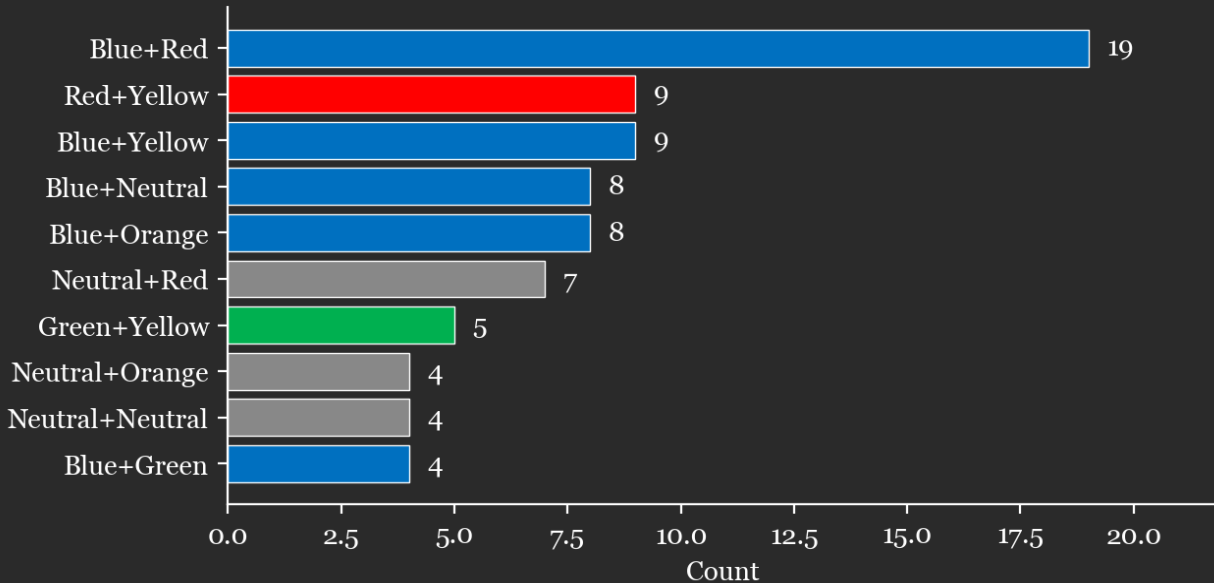
Accent Color Frequency



Pairings

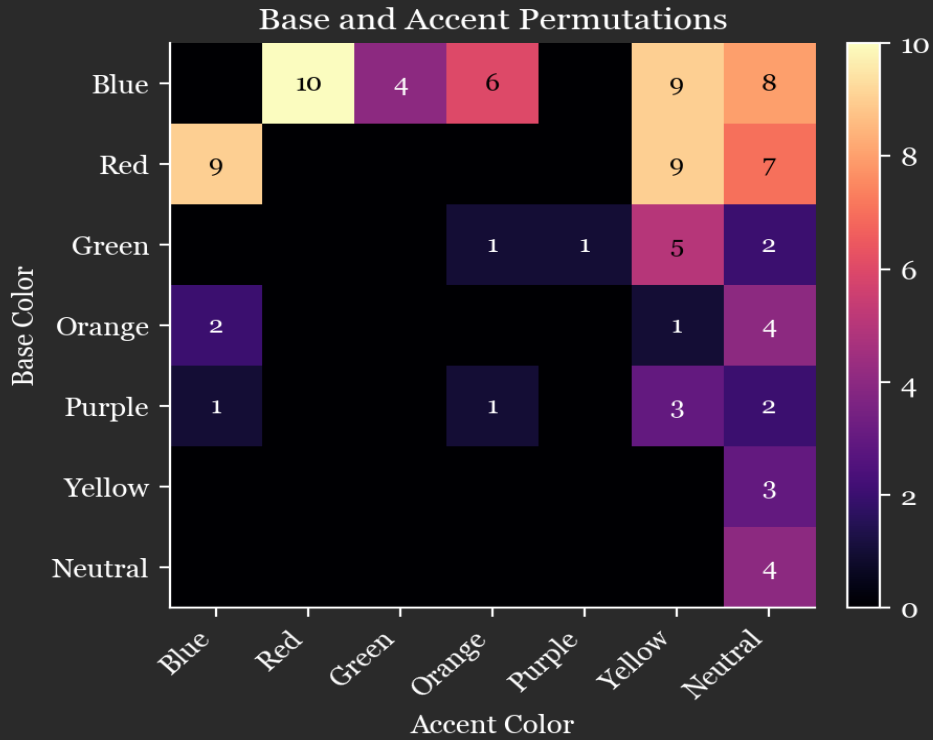
The most common combination is blue+red at 21 percent, followed by blue plus yellow, red plus yellow, blue plus neutral, and blue plus orange. Order matters in branding, so the same colors can read as a different identity depending on which leads. Of all 21 possible unordered pairings of the six chromatic colors plus neutral, only 19 actually appear in any league. The three missing combinations are red plus green, red plus orange, and red plus purple. Red, despite being a popular base color, struggles to find a second.

Top 10 Color Combinations



Permutation Heatmap

Reading rows as base and columns as accent, the heatmap below makes the structural asymmetry explicit. Blue dominates the top row. Yellow owns the right column. Most off-diagonal cells are zero or near zero, meaning the design space is sparse despite 49 possible cells.



Takeaways

Three findings stand out. First, the league color economy is bimodal. Blue and red account for 60 percent of base colors, and neutral and yellow account for 60 percent of accents. Second, yellow is structurally ornamental. It is the rarest base but the most popular chromatic accent, implying that designers reach for yellow when they need contrast rather than identity. Third, red is socially incompatible. It is a frequent lead but pairs with very few partners. The three missing combinations in the dataset all involve red, suggesting that warm hues clash with other warm hues in ways that cool hues do not.