**Intro paragraph**

Tate’s first location opened in 1897 and displayed only a small collection of British artworks. Today, the Tate network consists of four galleries that display over 70,000 pieces of British art from 1500 – present (Tate Britain) and international modern and contemporary art (Tate Modern, Tate Liverpool, and Tate St. Ives). The Tate states that “British art is represented by artists chosen for their contribution to its history and development, rather than their nationality alone. The collection continues to expand its holdings of modern and contemporary art from around the world.” <https://www.tate.org.uk/about-us/collection>

**Transformation**

**Tate Acquisition Process (**[**https://www.tate.org.uk/about-us/collection/acquisitions**](https://www.tate.org.uk/about-us/collection/acquisitions)**)**

All works acquired by Tate undergo the same acquisition procedure. Proposed pieces are discussed by teams of specialist curators, who then recommend pieces for acquisition to the Collection Group.

Ultimately, the Tate’s mission is to “increase the public’s knowledge, understanding and appreciation of art.” The Tate does this by embracing works of all medias, from paintings and sculptures to photography/film and performance.

Though the Tate first opened to the public in 1897, works of art had been acquired as early as 1823. Artworks had been steadily acquired throughout the latter half of the 19th century and into the 20th century, and most acquisitions were either in the form of paper or painting. Most notably, Tate acquired 37,893 works in 1856, with over 80% of those works in the form of paper. In the last half century, the Tate has steadily acquired over 200 artworks a year, with more and more pieces in other mediums such as wood, film, and photo. This isn’t surprising, given the greater accessibility in photo and film in more recent decades.

**Who are the artists in the Tate collection?**

The Tate Collection’s 70,000 artworks come from 3,532 artists. The artist with a whopping 39,389 works in the collection is English Romantic artist James Mallord William Turner. Turner is most well-known as a landscape painter and for his expressive coloring, imaginative landscapes, and often-times violent marine paintings (View in the Avon Gorge 1791 shown) (<https://www.tate.org.uk/art/research-publications/jmw-turner/joseph-mallord-william-turner-1775-1851-r1141041>). His works often reflected changes the world around him, notably inspired by industry, war, travel, politics, slavery, and the environment. (<https://www.tate.org.uk/art/artists/joseph-mallord-william-turner-558/six-ways-jmw-turner-painted-changing-world>).

Rounding out the top 5 are George Jones, with 1,046 works, Henry Moore, with 623 works, William Daniell, with 612 works and Joseph Beuys with 578 works. From there, we can see that the number of works per artist drops significantly with 75% of artists having fewer than 5 of their artworks in the Tate collection.

**Special Feature: British Watercolors**

**Colors—dominant vs biggest watercolor colors through the years**

Approximately 10% of the Tate’s collection are watercolors. This is not surprising given Tate’s collection of British art and the fact that watercolors are often associated with Britain from mid-eighteenth to the mid-nineteenth century—the so-called Golden Age of Watercolor (<https://www.metmuseum.org/toah/hd/bwtr/hd_bwtr.htm>). According to the Victoria and Albert Museum (https://www.vam.ac.uk/articles/what-is-watercolour), watercolor is “a medium in which dry pigment is mixed first with a binder (usually gum arabic), then with water and then applied with a brush to a support such as vellum, paper, or even ivory. When the water dries, it is the binder that sticks the pigment to the support. Depending on the balance of pigment, gum and water, the artist can achieve a variety of effects.”

In the first half of the 19th century, watercolor papers and paints saw many improvements (https://www.handprint.com/HP/WCL/artist07.html), increasing the demand for watercolors, of which we see a noticeable increase in the creation of watercolors in the charts.

The tradition of British watercolors began with near-monochromatic landscape drawings. One specific type of monochromatic landscape was dark ink washed with a single hue. We can visualize both styles of monochromatic drawings in the widespread use of beige-brown tints that dominate and are used for most of each drawing and the proliferation of dark dominant colors. Later, a new “Romantic” style developed that tried to capture atmospheric effects, such as cloud-filled skies (some blues in both dominant and largest color proportion).

After this Golden Age of Watercolor, the creation of watercolors reverted back to pre-Golden Age numbers, though the dominant and most frequent colors did not change much from the beige-brown colors.

**Process**

From the beginning of time, humans have had a relationship with art, whether that be through

artwork, music, or dance. Art is special in the way that it can cross cultural,

religious, and social boundaries. Art not only communicates information, but also allows for

self-expression and self-awareness in situations when it is difficult to do so otherwise.

Like everything else in the universe, art changes throughout the years. When Tate first opened in the late 1800s, it had a small collection of British works housed in one gallery. Today, Tate

consists of four galleries throughout the United Kingdom and a collection of 70,000

artworks–British art from the 1500s - today and international modern and contemporary art.

**Data**

The main artwork and artist data come directly from the Tate Gallery (<https://github.com/tategallery/collection>), last updated in October 2014. The two main datasets are artworks and artists. Because the data are a bit dated, URLs to artwork images in the original dataset are mostly broken. Instead, images used for the treemap and the color charts come from OpenDataSoft ://public.opendatasoft.com/explore/dataset/the-tate-collection/table/. The data on OpenDataSoft are the same as the one’s on the Tate GitHub, but the image links in the OpenDataSoft data are housed in their database.

**Limitations**

The data that is available is quite complete. I only have two concerns: the first is that the data were last updated in 2014; and the second is that I was not able to obtain images for all artists in the treemap, so there are some blank white areas.

**Story/Design**

From the 3 Minute Overview, I wanted the story to be roughly how art changes over time relative to Tate. I first look at the growing collection over the years and the artists within their collection. I felt that a stacked bar with medium subgroups would be easily interpretable for acquisitions over time and grouped medium into 7 categories to not overwhelm the reader. For the artist collection, since this data is about art, it’s appropriate to find an example of each artist’s work to fill the treemap (size corresponds to number of artworks), with a mouseover giving the artist’s name and count of works in the Tate collection. Finally, because of the British tradition of watercolors, I wanted to see if/how colors, in watercolors in the Tate collection specifically, changed over time. I downloaded the artwork images and ran them through two python packages to give me dominant/most frequently used colors (1 each for each artwork). I ordered the colors for each artwork and created circles (filled in by the corresponding color from the python color analysis) to represent each artwork by year created. Ordering colors makes it easier to visualize the frequency of lighter/darker colors throughout the years.

**Challenges/Takeaways**

Due to my limited knowledge of JavaScript and HTML/CSS, I found putting data into the format for a specific chart type and fixing small details quite difficult and sometimes tedious. However, I do appreciate how D3.js allows me to make very aesthetic, informative, and creative charts and to format them the way I want.

**Disclosures**

The charts presented make frequent use of color. I acknowledge that my charts can be difficult to interpret for those with color vision deficiencies.

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