

# The Historical Evolution and Significance of Glassware in Wine Presentation

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**Abstract:** *From their invention in the 1400s to the present, wine glasses have undergone both aesthetic and functional changes. Clear glass was made possible in the fifteenth century by the glassblowing skills of Venice, despite the glass industry's "glass disease." Lead oxide was added to innovations in the 17th century, especially those of George Ravenscroft, which improved clarity and durability. The 18th century saw a rise in the use of stemmed glasses, which were fashionable for their elegance and ability to regulate temperature. It became essential to serve wine at the proper temperature; red wines should be served at 12–18°C, white wines at 8–12°C, and champagne at 5–7°C. Wine glasses' anatomical structure has been developed to affect how flavours are perceived, ventilation, and scent retention. To bring out the distinct qualities of each wine, several wine glasses were designed for reds, whites, and champagne. All things considered; the evolution of wine glasses has improved the experience of sipping wine.*

**Keywords:** invention, wine glasses, aesthetic changes, functional changes, anatomical structure, flavour perception, ventilation, scent retention, distinct qualities, experience, sipping wine.

## I. INTRODUCTION

1400s

Although glass has been used for wine consumption since earlier times, the current shape that comes to mind - which is simply a bowl, a stem, and a base - is medieval. The glass that we know today most likely first appeared in Venice around 1400.

Venice served as the global hub for glassblowing back then. The Venetians were able to produce "cristallo," a highly prized type of clear glass, since they had figured out how to cleanse their alkaline source. This implied that, in regular air, the original clear glasses may start to corrode very quickly.

The "glass disease" was first identified by "weeping," which was the result of moisture causing alkali to leak out of the glass, and "crizzling," which was a sequence of tiny cracks resulting from the alkali loss that eventually led the glass to break.

When the Venetian glassmakers started filtering their raw materials to get rid of the things that stained the glass, such as lime, which served as a stabilizer, they unintentionally eliminated some of the ingredients that gave the glass its durability.

1600s

The English started to imitate the Venetians and establish their own glass business in the seventeenth century. George Ravenscroft was assigned the task of improving and beautifying glass in the 1670s. He strengthened the glass even more and gave it a crystal-like appearance by adding flint and lead oxide to the mixture. This is due to the fact that lead oxide alters the properties of light, causing dispersion—the phenomenon wherein various colours in light move at different rates.

1700s

The wine glass was kept away from the drinker in the early 1700s. It would have been your valet or footman who brought you your glass and filled it. After that, you would empty its contents and give it back to them. However, the wine bottle and glass went to the dinner table in the late 1700s and early 1800s. Wine glasses became more refined and taller, with longer stems that twisted and had little bulges known as "knops." However, the visually appealing stem served a useful function as well. When a hand is placed over the bowl, wine can easily become heated.

1800s onwards

Although the wine was given at the proper temperature, it is easy for it to become overly warm by touching the bowl with your palm. Holding a glass by the stem not only maintained the wine's ideal temperature but also gave off an effete and exquisite vibe.

Wine serving temperature

Many times, people forget to check the wine's serving temperature. Nonetheless, the ideal serving temperature is essential to bringing out a wine's complete flavour and fragrance. It's crucial to keep in mind that every wine has a perfect serving temperature, and not all wines pair well with a particular temperature.

The ideal temperature to enjoy red wines is between 12 and 18°C, white wines between 8 and 12°C, and champagne or dessert wines between 5 and 7°C.

It is recommended to decant and uncork red wine at least half an hour or more prior to serving.

White wine is best served cold; try to keep it cool while serving.

Wines are usually harmed by extreme temperature swings. With Wine ware's "Wine Storage Temperature Guide," which offers helpful advice on how to keep your wine bottles, you can avoid this. (Wineware, n.d.)

Anatomy of a Wine Glass

As a matter of fact, the way the wine spreads to the sides or goes across the tongue to the rear depends on the shape of the glass. Thus, the same wine can taste different in different glasses. According to Maximilian Riedel, his grandpa Claus Riedel, an apprentice glassmaker in Italy in the 1950s, used to host friends over and serve wine from all the many experimental forms he had been creating. His friends' opinions on the quality of the wine, despite the fact that they were sipping the same one, varied greatly, which made him believe that the size and shape of the glass was affecting the flavour. That's how the grape-specific forms of today came to be. It's also important to remember that all wine glasses were straight-sided before this; Claus Riedel was also responsible for the invention of the current wine glass's "egg" form.

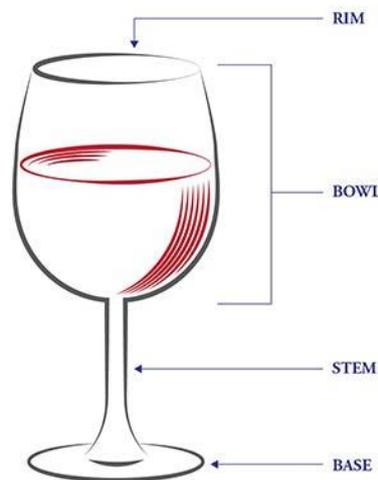


Figure 1 Anatomy of a Wine Glass (Goog)

The rim

controls the initial taste perception by the brain and where the wine is directed onto the tongue.

The bowl

This is where the wine is kept. To maximize the wine's contact with the air, fill the glass to about one-third of the way, or to the broadest point in the bowl. In order to focus and direct the scents toward your nose, bowls are frequently tapered. This prevents wine from spilling onto your shirt while you swirl it around the glass, producing more scents!

The stem

This section, which joins the base and the bowl, is what you hold.

The foot or base

This was the component that held the wine glass upright.(Healey, n.d.)

Red wine glasses

Red wine glasses are distinguished by a broader, rounder bowl, which speeds up the process of oxidation. Flavour and aroma are thought to be slightly changed by the wine's chemical reaction with oxygen from the air. Red wines, whose complex flavours are supposed to be smoothed out after being exposed to air, are often thought to pair well with this oxidation process. Glasses for red wine might have distinct styles of their own, like

**Bordeaux Glass:** Bordeaux glasses are tall and broad-bowled, and they are made to channel wine to the back of the mouth, which is ideal for full-bodied red wines like Syrah and Cabernet Sauvignon.



Figure 2: Bordeaux Glass (Google, n.d.)

**Burgundy Glass:** Wider than a Bordeaux glass, it has a larger bowl to hold the scents of lighter red wines, such as pinot noir. Wine is delivered to the tongue tip with the help of this type of glass.

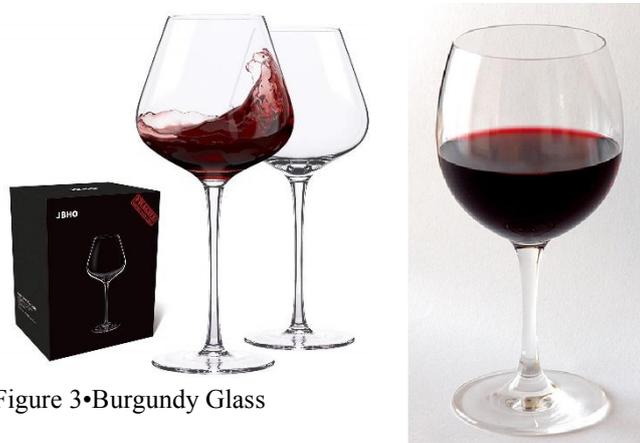


Figure 3•Burgundy Glass

White wine glass

Full-flavoured white wines, such as oaked chardonnay, are often the best when served somewhat oxidized. Oxidation is not as desirable for fresher, lighter varieties of white wine because it tends to cover out the subtleties of the wine. Many white wine glasses feature a smaller mouth, which lowers surface area and, consequently, the rate of oxidation, to preserve a crisp, clean-tasted wine. Even smaller mouths are used for sparkling wines, such as Champagne or Asti, to prolong the wine's effervescent period in the glass.



Figure 4 White Wine Glass (Google, n.d.)

### Champagne flutes

The tall, narrow bowl on top of a long stem is the distinguishing feature of champagne flutes. The shape is intended to maintain the appeal of sparkling wine as it is being consumed. Similar to wine glasses, the flute is meant to be held by the stem in order to assist keep the liquid inside from warming up due to hand heat. The form of the bowl itself aids in maintaining the beverage's distinctive fizz. Reducing the surface area at the bowl's opening accomplishes this. Furthermore, the flute shape enhances the visual appeal of champagne by enabling the bubbles to go farther because of its thin shape, creating a more pleasing appearance.



Figure 5 Champagne flutes (Google, n.d.)

### Sherry glasses

Drinkware such as sherry glasses or schooners are typically used to serve aromatic alcoholic beverages such liqueurs, sherry, port, aperitifs, and stacked shooters. One kind of sherry glass is the copita, with its narrow taper that enhances aromas.



Figure 6 Sherry glasses (Google, n.d.)

Objectives:

- To know the history of glassware in wine service.
- To know the different types of Glassware used in wine service.

## II. REVIEW OF LITERATURE

According to the author the physical characteristics of the glasses (opening diameter, maximum diameter, height, and volume) were shown to be linked with the mean sensory scores. The perceived overall strength and colour of the wines were highly influenced by the form of the wine glass. The Chardonnay™ glasses had the lowest total intensities while the Burgundy™ glasses had the highest. The cuppa-diameter to cuppa-opening ratio showed a strong correlation with total intensities for both the white ( $r = 0.89$ ) and red ( $r = 0.99$ ) wines. The maximum diameter, height, and volume of the glasses were substantially associated with the intensity of the wine colour. (Cliff, 2010)

The article's findings demonstrate how a glass's attributes can impact a wine's bouquet and flavour, and they imply that logically optimizing these attributes based on experimental data may improve wine consumption. (F. Venturi, 2014)

The glass in which wine is served is just as significant as the wine itself, claims a blog on inner elementary's wine-drinking customs. Wines of lower quality might appear great when poured into the right glass. However, using the wrong glasses can make even the best wines taste bad. Because many styles of wine glasses are available for different types of wine, selecting the ideal glass to serve wine at a social gathering requires attention to detail and precision. (ellementry, n.d.)

The authors report that their findings, which were obtained using a variety of techniques, including physiological measurements and objective measurements of the amount consumed, indicate that using straight-sided glasses could be one intervention among many that are required to lower the consumption of drinks that are harmful to one's health. (Tess Langfield, 2020)

## III. METHODOLOGY

The data for this study was obtained through the utilization of secondary sources, including pre-existing materials like books, academic journals, websites, archival documents, and various historical records. These sources served as valuable repositories of information, enabling a comprehensive examination of the subject matter in question.

#### IV. CONCLUSION

Over the course of centuries, wine glasses have undergone a fascinating transformation that reflects advancements in technology, aesthetics, and wine knowledge. Wine glasses have been refined over time, from the Venetian glassblowing mastery of the 15th century to the inventiveness of George Ravenscroft in the 17th century. The invention of stemmed glasses in the eighteenth century served a practical as well as stylistic purpose by enabling accurate temperature regulation.

These days, the appropriate temperature for serving wine is well-understood. By highlighting the distinctive qualities of various wine varietals, the creation of specialty wine glasses—such as Bordeaux and Burgundy glasses, white wine glasses, champagne flutes, and sherry glasses—has further enhanced the wine-drinking experience.

When it comes to wine, the glass design and shape are just as important as the wine itself. Wine lovers have learned to value how the correct glass may improve the flavour, fragrance, and overall experience of their favourite wines. The art and science of wine glass design will advance along with wine appreciation, making sure that every glass serves as a vessel for the enjoyment of exquisite wines.

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