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How Drinking Vessels Influence Customer Taste Perceptions

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Rosen Research Focus | Dr. Marissa Orlowski

HOW DRINKING VESSELS INFLUENCE CUSTOMER TASTE PERCEPTIONS

First impressions count and it takes just a fraction of a second for us to decide whether we like someone when we meet them for the first time. With a collaborator, Rosen College of Hospitality Management’s Dr. Marissa Orlowski is looking at how similar perceptions can be made about products and what implications this has for the food and beverage sector. They have discovered that the kind of vessel in which drinks are served affects both people’s taste perceptions and their willingness to pay.

There was a time when coffee drinkers only had to decide whether to have it with or without milk – it was literally a black or white choice. Now you can choose between an espresso, latte, cappuccino and macchiato and flat white. Then there’s the milk – skimmed, semi-skinned or whole, or maybe soy, almond, rice, goats and even coconut. That’s before you think about whether you want it in a cardboard cup, glass or ceramic mug – and would you like that to go?

So how do consumers decide what to buy when they are faced with such a choice?

DECISIONS, DECISIONS

It’s generally agreed that consumers make purchasing decisions according to their perceptions of quality, price and value. The way products are packaged, or in food and beverage terms, the way they are presented, has been discussed for hundreds of years what shape the drinking vessel is made, as well as its texture.

Then there is the impact of shape on consumer perceptions. Tests have suggested that drinks in rounded vessels taste sweeter and/or fruitier than those served in a straight-sided glass. For coffee, short mugs are associated with bitterness, narrow mugs with stronger aromas, and wide mugs with sweetness. As wine, people have discussed for hundreds of years what shape of glass should be used for different wines and the jury is still out.

Much less is known about drinking vessels for more humble beverages. This is surprising, not least because of the many ways in which soft drinks can be served.

Take the example of global brands like Coca-Cola and Pepsi. If you’re dining in, the drink can be dispensed by a soda fountain into a glass or plastic cup, or be presented in a bottle or a can, with or without an accompanying straw or glass. Do those vessels create different taste expectations and perceptions? Dr. Orlowski and her collaborator wanted to find out.

RESULTS SHOWED THAT BEVERAGES SERVED IN ALUMINIUM CANS ARE EXPECTED TO TASTE WORSE THAN THE OTHER SERVICE VESSEL OPTIONS AND CONSEQUENTLY CONSUMERS ARE WILLING TO PAY LESS FOR THESE BEVERAGES.

Based on their reaction to the images alone, participants were asked about their expectations of the drinks’ taste, deliciousness and flavor, rating each measure on a seven-point scale. They were also asked how much they would be willing to pay for each drink.

Standard statistical methods were used to analyze the results. The study’s findings supported all three hypotheses. Though there was no significant difference between expectations of the taste of the drinks in the glass, plastic cup and bottle, these were rated higher than expectations of the taste of the drinks in the can.

Dr Orlowski explained: “Results showed that beverages served in aluminum cans are expected to taste worse than the other service vessel options and consequently consumers are willing to pay less for these beverages. Furthermore, the findings support taste as the underlying mechanism for the impact of the service vessel on willingness to pay.”

The second study tested the same hypotheses, using the same vessels, but this time in a live setting in which people tasted the drinks before making their assessments. To avoid potential familiarity with the drinks used, lightly flavored sparkling water was chosen rather than cola, and to avoid participants being influenced by the vessels’ touch and texture, they were asked to drink through a straw.

The experiment took place in a university lab in the United States and involved 82 people, 23 men and 59 women. With an average age of 36, all lived in the United States. 70% said they dined out weekly, with a typical spend of just over $16.

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The details are interesting. For example, consumers have lower expectations of taste when drinks are served in flimsy cups because people generally equate weight with higher quality. It has also been shown that consumers’ notions of sweetness are dependent on the material from which the drinking vessel is made, as well as its texture.

CONSUMER PERCEPTIONS

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Means of taste evaluations for studies 1 & 2

<table>
<thead>
<tr>
<th>Beverage Type</th>
<th>Study 1 Mean</th>
<th>Study 2 Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Can</td>
<td>4.15%</td>
<td>4.42%</td>
</tr>
<tr>
<td>Glass</td>
<td>4.15%</td>
<td>4.42%</td>
</tr>
<tr>
<td>Plastic Cup</td>
<td>4.19%</td>
<td>4.41%</td>
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</table>

Means of willingness to pay for studies 1 & 2

<table>
<thead>
<tr>
<th>Beverage Type</th>
<th>Study 1 Mean</th>
<th>Study 2 Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Can</td>
<td>$1.50</td>
<td>$2.10</td>
</tr>
<tr>
<td>Glass</td>
<td>$1.50</td>
<td>$2.10</td>
</tr>
<tr>
<td>Plastic Cup</td>
<td>$1.50</td>
<td>$2.10</td>
</tr>
</tbody>
</table>

Dr. Marissa Orlowski is an Assistant Professor in the Foodservice and Lodging Management (FLM) Department at the University of Central Florida’s Rosen College of Hospitality Management. Her academic career is preceded by extensive management experience in the hospitality industry, and her primary research interest lies in the domain of food and beverage. She also serves as an Associate Editor for the International Journal of Contemporary Hospitality Management.

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Were you surprised to find that the study suggests there was no significant difference between people’s perceptions of taste for glasses and plastic cups?

Yes, Dr. Lefebvre and I were both surprised to see there wasn’t a significant difference between glass and plastic cups in terms of taste perceptions. Across both studies, we expected the glass to rate significantly higher than the plastic cup because glasses are heavier, and heavier packages are generally perceived by consumers as having higher quality. One possible explanation, particularly for our second study, is that we used a hard plastic tumbler in order to stay true to a type of vessel common to fast-casual and casual dining restaurants, rather than a disposable plastic cup. This may have caused consumers to perceive the plastic cup in a more positive light, cancelling out any potential differences between it and the glass.