

Bourbon or rye? You can't tell the difference, new study says

April 22 2016



Bartenders pour whiskey at Drexel's annual Philly Chef Conference, hosted by the Center for Hospitality and Sport Management. In a recent study, a Drexel food scientist found that rye and bourbon whiskeys, despite popular opinion, are not discriminable for average consumers.

Whiskey aficionados may claim that Manhattans must be made with fiery, grassy rye, while an Old Fashioned requires the sweetness of

bourbon.

But a new study from a Drexel University food scientist shows the average consumer cannot discriminate between the two flavors.

Jacob Lahne, Ph.D., an assistant professor in the Center for Hospitality and Sport Management, found, in a blind sorting task of American ryes and bourbons, participants were more likely to group together products by brand rather than type of whiskey.

The results were published in the *Journal of Food Science*.

"There is definitely a tendency for bartenders to talk about how some drinks should absolutely be made with bourbon or rye, and I think it's clear now that there is more flexibility," Lahne said. "In a way it's fun and exciting—it gives you a bigger universe to play with."

The only legal difference between bourbon and rye products is their mashbill: Bourbon must be fermented from a mash that is majority corn, and rye from a majority of its eponymous grain. Otherwise, the legal and stylistic requirements for the two products are identical. So it's possible for a 2 percent difference in mashbill to tip a whiskey from one category into the other.

Yet, in both pop culture and whiskey educator circles, the two kinds are held to be distinct —bourbon is often described like smooth caramel, while rye is called dry and brash.

Despite the quickly growing demand for whiskey in the United States (with revenues over \$2.6 billion in 2014), there had been no rigorous examination of the assumed difference between bourbon and rye.

Lahne wanted to know, how can straight rye and bourbon be so

dramatically different, if their basic recipe is so similar?

To get to the bottom of the conundrum, Lahne presented 21 study participants with trays of 10 anonymized whiskeys—five bourbons and five ryes—in random order. They were instructed to smell but not taste the alcohol. This method is in accordance with published guidelines for Scotch whisky evaluation.

The participants were then asked to organize the whiskeys into no fewer than two and no more than nine groups, by any criteria they wished. In a second session, when the participants came back days later, the same whiskeys were presented in an identical fashion with new, randomized labels. They were asked to sort the whiskeys into groups again.

The researchers next used a statistical analysis (called DISTATIS) to interpret the group's responses. Lahne and his team found that the subjects did not separate the whiskeys based on mashbill (bourbon vs. rye), but instead were more influenced by properties like alcohol content, age at bottling and brand. For instance, participants were very likely to group together Jim Beam whiskeys.

Lahne hypothesizes that the researchers saw this trend because individual makers have strong "house" flavors. Jim Beam whiskeys—both bourbons and ryes—might be characterized as smelling like roasted peanuts.

"It is interesting how distinctive that flavor is," he said.

The perceived differences between [bourbon](#) and rye may stem from a time in history when mashbill differences between the two were greater, Lahne said. However, modern American whiskeys that are most popular today are very likely more closely related.

In future studies, Lahne and his team plan to further explore how specific sensory attributes—like that peanut aroma—may be linked to producer, alcohol by volume, age, chemical makeup, and other production variables.

More information: Jacob Lahne et al. Replication Improves Sorting-Task Results Analyzed by DISTATIS in a Consumer Study of American Bourbon and Rye Whiskeys, *Journal of Food Science* (2016). [DOI: 10.1111/1750-3841.13301](https://doi.org/10.1111/1750-3841.13301)

Provided by Drexel University

Citation: Bourbon or rye? You can't tell the difference, new study says (2016, April 22) retrieved 26 April 2024 from <https://phys.org/news/2016-04-bourbon-rye-difference.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.