



# AT THE BAR WITH BOWDITCH

A Legal Blog for the Craft Brewing Community

## Legos, Robots, and Beer! Oh My!

BY JULIE K. O'NEILL • MARCH 3, 2020

Those sneaky scientists are up to it again. Meet your new beer testers: robots with Lego parts.

As you may have noticed, beer is very popular these days. Heavy competition puts pressure on brewers to improve processes and save time and money in innovative ways. A research group in Australia has created an option to test new brews for consumer acceptance without spending time and money on sensory tests that involve people doing the judging.

When you try a new brew, how do you judge it? Not just taste. Before you taste it, you most likely see it and even may feel it. Color, foam qualities, and even smell can affect your opinion of a beer. When a beer is hoppy, the hoppiness affects not only the flavor, but also smells that are released when the foam bubbles burst.

Based on consumer testing sessions involving 17 types of beer, the researchers constructed various algorithms for predicting consumer preferences in carbonation mouthfeel, bitter taste, flavor and overall liking.

They then created a machine programmed with computer vision algorithms that assess color and foam-related aspects, equipped with sensors to measure temperature, alcohol, and carbon dioxide release, and a smartphone to record pouring and foam behavior and, best of all, built using components sourced from Legos: two Lego servo motors. Introducing RoboBEER. While RoboBEER pours the beer, it scans and assesses it for 15 parameters related to color and foam.

Of course, RoboBEER can't drink beer. That job will remain one for the humans.