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Knowing the Ingredients Can Change the Taste

By [BENEDICT CAREY](#)

Some graduate students grind out their dissertations in late-night sessions, alone with their thoughts in the wasted fluorescent glow of a windowless lab. Others spend those same hours drinking in bars, “discussing” their thesis over a round or drinks or three.

Leonard Lee, a recent graduate of the [Massachusetts Institute of Technology](#), managed to do both at the same time. A few times a week for about six months, Mr. Lee spent his evenings at an on-campus watering hole, either the Thirsty Ear or the Muddy Charles, buying fellow patrons beer, as part of a study of taste.

In an interview Dr. Lee, now an instructor at the [Columbia University](#) business school, swore that this exercise was not a ruse to meet women or an effort to stick M.I.T with his bar tab.

And he has a published paper to back him up: “The Influence of Expectation, Consumption and Revelation on Preferences for Beer,” appearing in the December issue of *Psychological Sciences*, one of the field’s leading research journals.

In the study, Dr. Lee and two M.I.T. researchers, Shane Fredrick and Dan Ariely, found that they could change beer drinkers’ taste preferences by telling them about a secret ingredient in a beer before they drank it.

In previous studies, psychologists had found that putting brand labels on containers of beer, soft drinks and other products tended to enhance people’s subjective ratings of quality. But the new experiment

demonstrates that this preference involves more than simple brand loyalty. It changes the experience of taste itself.

“It’s a clean demonstration that what we think is going into our mouth actually changes what we taste, down to the level of the taste buds themselves,” said Michael Norton, an assistant professor of business administration in the marketing department of the [Harvard](#) Business School who did not take part in the research.

In a series of experiments, Dr. Lee approached bar patrons and asked them whether they wanted to participate in a beer taste test, with free beer. Few refused; 388 young men and women tasted two beers each, one a regular draft of Budweiser or Samuel Adams, and the other the same beer with a few drops of balsamic vinegar added.

Most beer drinkers say vinegar would worsen the drinks, previous work had found.

But Mr. Lee found that about 60 percent of the patrons in the blind taste test — they did not know which beer contained the vinegar — actually preferred the balsamic “M.I.T. Beer.”

Another group of tasters learned which beer was which after they had tasted the beers but before making their choices, and they, too, preferred the M.I.T. Beer by about the same margin as the blind-test group.

But knowing which beer had the vinegar before swigging soured the experience. About a third of the patrons who were told the identities of the beers beforehand chose the M.I.T. brew.

Dr. Lee said that the study showed that the experience of taste involved not only the sensation of a blend of ingredients, but also the “top-down” influence of expectations. Previous research with brain imaging had shown that expectations could change the trace of activity of people’s brains when tasting drinks.

Parents of young children know this instinctively. When giving him cod liver oil as a nutritional supplement, Dr. Lee said, his mother called it

“syrup.”

In the spirit of blind testing, other parents choose not to create any bias at all. They answer, “What’s in this?” with, “Just try it, you’ll like it.”

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