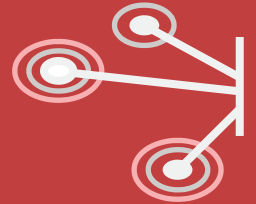# Cognitive Marketing and Demographic Targeting

How the Gastrograph System can help you target the right customers

Perception is variable. What we see and taste every day is broken down into a multitude of factors that change from person to person. Any introductory psychology class will teach you that perception and cognition are subjective. In fact, entire fields of cognitive psychology specifically target biases in cognition. The Handbook of Evolutionary Psychology defines such cognitive biases as,

> "Pattern[s] of deviation in judgment, whereby inferences about other people and situations may be drawn in an illogical fashion."

Numerous attempts have been made in various gastronomic studies to understand why some people perceive flavors differently from their peers. Whether we are looking at socioeconomic factors related to upbringing or simply genetic factors related to taste, it's undeniable that different people will taste the same product differently. Sometimes genetics play a role in how you taste different flavors. We've known this since the 1930s, when a chemist named Arthur Fox accidentally released a bitter powder PTC into the air and noticed that some people were struck by an extremely bitter taste, whereas others had no reaction. Further research then conclusively proved that significant portions of the population actually lack a gene that allows them to taste the specific type of bitterness in PTC.

Since Arthur Fox, sensory scientists have identified various other quirks in taste like the fact that while 30% of the American populations are non-tasters of several types of bitterness, only 3% of Asians are non-tasters. Also of note was a study that showed 25% of UK citizens are supertasters and extra sensitive to a variety of flavors including sourness.

EXECUTIVE SUMMARY

- Taste perception at the level of the individual is subjective – it varies across different demographic tasting populations, preference archetypes, experience levels, and environmental factors

- The existence of non-tasters of bitterness and super-tasters extra sensitive to most flavors is accepted as fact in mainstream sensory science.

- The Gastrograph System analyzes differences in taste-perception using artificial intelligence and machine learning to make generalizations about various demographics' preferences. Ever wonder how Caucasian females and African American males taste your product differently? We can answer that question with data.

- Gastrograph can apply this research to find the best tasters and those most sensitive to flaws amongst a producer's sensory panelists and, by extension, allow breweries to target certain members of their crews for further training.

- Gastrograph can also use data from the reviews to determine what words and terms most resonate with ideal, high-value customers, helping the marketing team make the most optimal branding decisions

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Demographic Targeting

Different demographics being extra-responsive or unresponsive to bitterness and sourness have significant implications for the beverage industry. That is why here at AFS we use artificial intelligence and machine learning to analyze taste patterns of various demographics in an attempt to learn about differences in peoples' palates. Have you ever wondered how your IPA tastes to 25-40 year old African American males versus 21 – 25 years old Caucasian females? What flavors do each of those groups like best, and can they taste them in your brews?

This is where the Gastrograph System's Demographic Targeting analysis start to come in. Through reviews generated by your team, we are able to tell whether people of different demographics can tell the difference between two of your batches or what percentage of the population can taste a flaw in a bad batch. (This is referred to as our Demographic Targeting analysis and is the first step before Cognitive Marketing analysis.)

To see an example of how this all works, here is an objective flavor profile of an average IPA:

How would this flavor profile be different if we broke it down by demographic? If a non-taster of bitterness were to try the brew, would he/she rate it higher or lower? If you market this brew toward middle-aged Caucasian males, what percentage of them will find this IPA too bitter? Caucasian females? These are the questions that the Gastrograph System can answer.

Another application of this analysis is to see who on a sensory crew has the most sensitive palate and is best able to detect flaws. No tasting crew would be complete without a supertaster and a non-taster, after all. And if a sensory crew lacks a member of a specific demographic that needs to be kept in mind, we can alert the client to that potential oversight.

Cognitive Marketing in a Nutshell

Cognitive Marketing, like Demographic Targeting, is meant to discriminate between certain demographics of the brewery's clientele.

Diction is tricky. There's more to word choice than finding an adjective that describes a product, and there will always be certain terms that resonate with the intended audiences better than others. How does one find those key words? Enter Cognitive Marketing analysis.

We help beverage manufacturers communicate and describe their products in a way that allows customers to taste the best of what they have and to not taste what our data says they don't like. Through tasters' reviews, the Gastrograph System can see which terms correspond with higher hedonic acceptance for that brand/type and which demographics like them the most. Factors like geography, gender, race, and age all are taken into account by the Gastrograph System. We can empower the brewery's

marketing team to make the best marketing choices possible.

Returning to our last example with the IPA, questions we would now be asking and answering are, "What terms resonate the most with African American males when they taste an IPA? How about Caucasian females? Are higher rated IPAs describing themselves as 'hoppy' or 'bitter'?" We answer these questions by leveraging data from a brewery's tasters' reviews and give a brewery's marketing department the tools and information they need to target their designated audiences in an optimal manner.

AFS's Cognitive Marketing analysis can also reduce cognitive dissonance and its impact on taste. Cognitive Dissonance is defined as

> "The mental stress or discomfort experienced by an individual who holds two or more contradictory beliefs, ideas, or values at the same time."

What that means for the beverage industry is that when consumers are told one thing but taste another, or expect a flavor that is not present, they end up disliking the product more. Our Cognitive Marketing analysis allows breweries to avoid making such mistakes in branding. If we tell a brew-master that not enough of the population can taste the marine flavor in his/her new oyster-based IPA, it could be a sign that plastering the word "oyster" across the label of the beer could be problematic.

Cognitive Marketing in the Craft Beer Industry

Cognitive marketing is ubiquitous in the craft brewing industry. Let's take Stone as an example. Traditionally, telling consumers that they probably won't enjoy your beer is not a good marketing decision. However, when Stone came out with one of their best selling ales, Arrogant Bastard, it said right on the label, "You probably won't like it." It then followed up with an implicit challenge,

> "It is quite doubtful that you have the taste or sophistication to be able to appreciate an ale of this quality and depth. We would suggest that you stick to safer and more familiar territory."

Arrogant Bastard ended up being one of Stone's most famous brews, at least in part due to that audacious labeling and name. Making a decision as bold as Stone's, though, is something that shouldn't be a gamble. With the Gastrograph System, we will be able to tell you whether certain words you've selected will resonate well with certain demographics. If you're targeting serious craft beer enthusiasts, the way you describe the color of your beer

might be more significant than if you were to simply market to a casual consumer of craft beer. What are the best descriptors for your color then? We'll have to let the data speak for itself, once the reviews come in.

Conclusion

Cognitive Marketing analysis' applications span across a wide variety of fields to make sure consumers will always be drinking high quality beers targeted towards their preferences. It goes hand-in-hand with the Gastrograph System's Demographic Targeting analysis to ensure optimal implementation of a beverage producer's outreach plans.

This is just one more example of how the Gastrograph System can protect your brand. The Demographic Targeting and Cognitive Marketing analyses are must-haves for growing breweries that want to focus more of their resources on targeted outreach. If you want your brewery, cofee roastery, etc. to grow efficiently, the Gastrograph System is what you need.