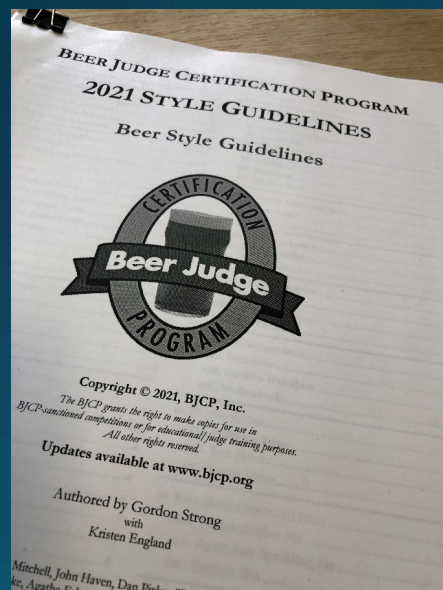


Evaluate your Beer like a Master Judge



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Course Outline

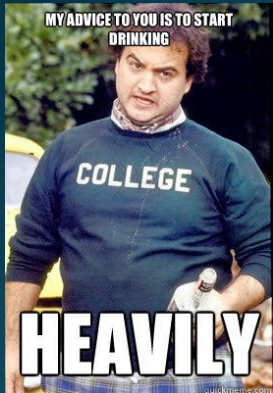
- Part 1: Beer Evaluation and Judging
 - Tasting Example
- Part 2: Assessing Aroma and Flavor
 - Tasting Example
 - Break
- Part 3: Describing Beer and Troubleshooting Faults
 - Tasting Example
- Part 4: Assessing Beer Style and Capturing Comments
 - Tasting Example
- Part 5: Building and Validating Skills

Beer Evaluation and Judging

Why Evaluate Beer?

- ***E-val-u-ate** (v): to determine the significance, worth, or condition of, usually by careful appraisal and study syn: appraise, assess*
- Significance of what? A specific example of beer
- Significance to whom? Brewers, Judges, Consumers, Breweries?
- Purpose and Standards of Appraisal vary by situation
 - Technical defects present
 - True to brand (or style)
 - New product development
 - Consumer preference
 - Stability over time
 - Competition or Awards

But Judging is Just Drinking, Right?



Pounding



Drinking



Tasting



Judging

Sensory Analysis vs. Judging

- Sensory Analysis in a Brewery
 - Trained sensory specialists, often not brewers
 - From Food Sciences
 - Statistical methods
 - Related to quality control
- Judging in Competitions
 - Uses some sensory analysis techniques
 - Comparison and ranking against other beers
 - Can include feedback
 - Like an expert opinion

Judging Process

Survey Beer

- Perceptions
- Identify, describe
- Quantify, qualify

Analyze Beer

- Troubleshoot
- Technical quality
- Feedback

Style Comparison

- Guidelines
- Style fidelity

Capture Comments

- Scoresheets
- Score or Rank

First Steps of Sensory Assessment

- Information gathering!
- Use all your senses
- Capture perceptions in your own words
- Organize using **Scoresheet** sections
- Be thorough and complete
- First impressions matter
 - Do you like it?
 - Would you drink it?

BEER SCORESHEET
 AHA/BJCP Sanctioned Competition Program

Judge Information:
 Judge Name (print) _____
 Judge BJCP ID _____
 Judge Email _____

Category Information:
 Category # _____ Subcategory (a-f) _____ Entry # _____
 Subcategory (spell out) _____
 Special Ingredients: _____

BJCP Rank or Status:
☐ Apprentice ☐ Recognized ☐ Certified
☐ National ☐ Master ☐ Grand Master
☐ Honorary Master ☐ Honorary GM ☐ Mead Judge
☐ Provisional Judge ☐ Rank Pending

Non-BJCP Qualifications:
☐ Professional Brewer ☐ Beer Sommelier ☐ Non-BJCP
☐ Certified Cicerone ☐ Master Cicerone
☐ Sensory Training ☐ Other _____

Descriptor Definitions (Mark all that apply):
☐ **Acetaldehyde** – Green apple-like aroma and flavor.
☐ **Alcoholic** – The aroma, flavor, and warming effect of ethanol and higher alcohols. Sometimes described as hot.
☐ **Astringent** – Puckering, lingering harshness and/or dryness in the finish/aftertaste; harsh graininess; huskiness.
☐ **Diacetyl** – Artificial butter, butterscotch, or toffee aroma and flavor. Sometimes perceived as a slickness on the tongue.
☐ **DMS (dimethyl sulfide)** – At low levels a sweet, cooked or canned corn-like aroma and flavor.
☐ **Ester** – Aroma and/or flavor of any ester (fruits, fruit flavorings, or roses).
☐ **Grassy** – Aroma/flavor of fresh-cut grass or green leaves.
☐ **Light Struck** – Similar to the aroma of a skunk.
☐ **Metallic** – Tinny, oily, copper, iron, or blood-like flavor.
☐ **Musty** – Stale, musty, or moldy aromas/flavors.
☐ **Oxidized** – Any one or combination of stale, winy/vinous, cardboard, papery, or sherry-like aromas and flavors.
☐ **Phenolic** – Spicy (clove, pepper), smoky, plastic, plastic adhesive strip, and/or medicinal (chlorophenics).
☐ **Solvent** – Aromas and flavors of higher alcohols (fusel alcohols). Similar to acetone or lacquer thinner aromas.
☐ **Sour/Acidic** – Tartness in aroma and flavor. Can be sharp and clean (lactic acid, or vinegar-like (acetic acid).
☐ **Sulfur** – The aroma of rotten eggs or burning matches.
☐ **Vegetal** – Cooked, canned, or rotten vegetable aroma and flavor (cabbage, onion, celery, asparagus, etc.)
☐ **Yeast** – A bready, saffron or yeast-like aroma or flavor.

Sensory Assessment Categories:
Appearance (as appropriate for style) _____ / 3
 Comment on color, clarity, and head (retention, color, and texture) _____
Flavor (as appropriate for style) _____ / 20
 Comment on malt, hops, fermentation characteristics, balance, finish/aftertaste, and other flavor characteristics _____
Mouthfeel (as appropriate for style) _____ / 5
 Comment on body, carbonation, warmth, creaminess, astringency, and other palate sensations _____
Overall Impression (as appropriate for style) _____ / 10
 Comment on overall drinking pleasure associated with entry, give suggestions for improvement _____

Scoring Section:
 Total _____ / 50
 Classic Example ☐ Stylistic Accuracy ☐
 Technical Merit ☐ Not to Style ☐
 Flawless ☐ Infaught ☐ Significant Flaws ☐
 Wonderful ☐ Lifes ☐

BJCP Beer Scoresheet Copyright © 2012 Beer Judge Certification Program rev. 120215
 Please send any comments to Comp_Director@BJCP.org

Stages of Tasting

Initial Flavors

- Matching to aromas
- Dominating impressions

Palate Tastes

- Body, mouthfeel
- Bitterness, carbonation

Finish

- Dryness
- Late flavors – do they change?

Aftertaste

- Lingering flavors
- Alcohol

Reissdorf Kölsch

- BJCP Style 5B Kölsch
- Privat-Brauerei Reissdorf
- Köln (Cologne), Germany
- ABV 4.8%
- IBU 27

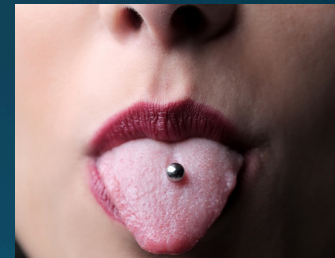
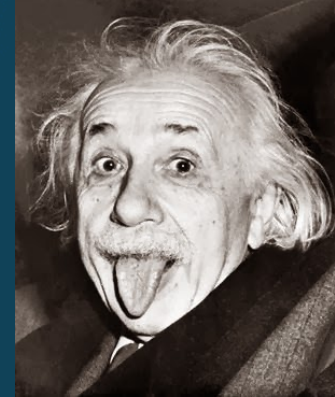


Assessing Aroma and Flavor

Flavor is Complicated

and individualized

- Flavor = Taste + Aroma + Other
 - Memories
 - Experiences
- Genetic Differences
- Basic Knowledge
- Learned Behavior and Training
- Physiological Effects

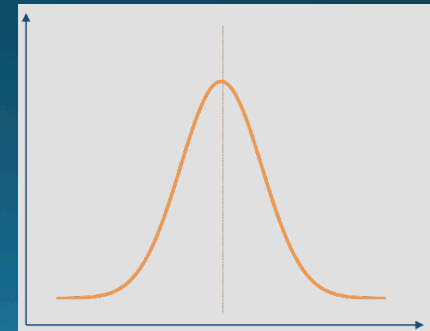


Evolution vs. Experience

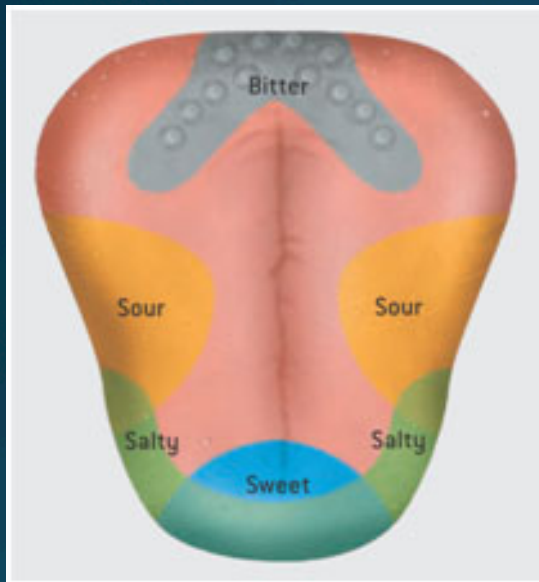


Aroma Techniques

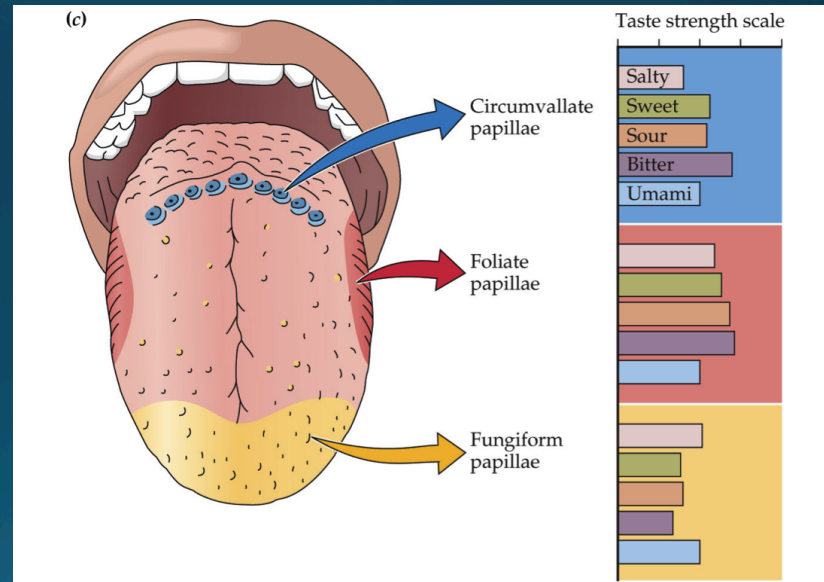
- Low sniff
- High sniff
- Drive-by sniff
- Dog sniff
- Swirl
- Capping
- Temperature effects
- Refreshing or resetting your nose



How Your Tongue Works



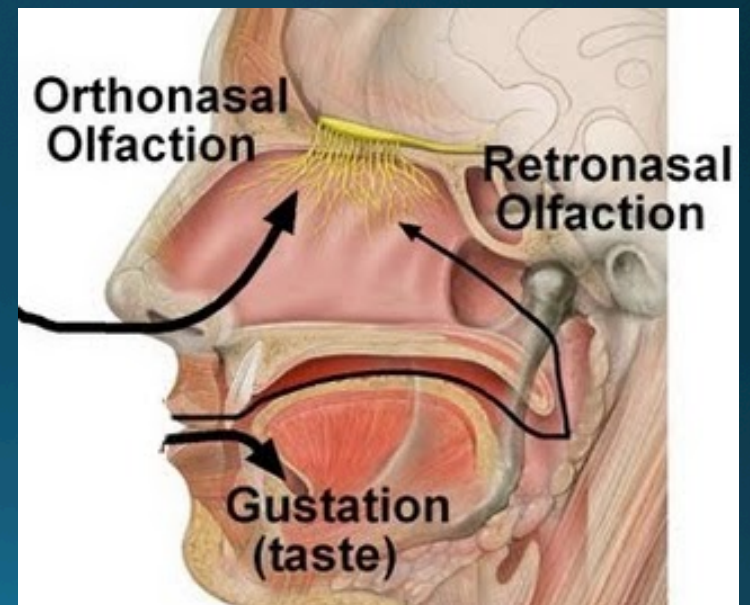
NO



YES

Tasting Techniques

- Clean palate
- Small sips
- Tongue swish, slowly, push beer not whip it
- Rest beer on tongue, **allow to warm**
- Chew
- Aerate
- Swallow (use good form)
- **Exhale through nose with mouth closed**



- Communication is the goal
 - Describe in detail what you perceived
- Use the Scoresheet as a guide
 - Go section by section
 - Use section prompts for completeness
- For each component
 - Is it present? If so, at what level?
 - Describe in detail – be precise if you can
 - Quantity and quality
- Think about balance of components

<h1 style="margin: 0; font-size: 2em;">BEER SCORESHEET</h1>										
AHA/BJCP Sanctioned Competition Program Use Regular BJCP Scoresheet for Full Evaluation and Feedback										
http://www.bjcp.org			Copyright © 2012 — BJCP, Inc.				http://www.homebrewersassociation.org			
Judge Name (print)			Style/Category				Entry #			
Judge BJCP ID#Rank			Special Ingredients:							
Judge Email			Other Notes:							
INSTRUCTIONS: ■ or ☐ boxes for attributes you perceive. Circle any boxes where style expectations were not met.										
AROMA Malt Hops Esters Other 12										
# Aspect	S	L	M	H						
Malt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Esters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phenols	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sweetness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acidity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments >					<input type="checkbox"/>					<input type="checkbox"/> Flavored
APPEARANCE Beer Straw Yellow Gold Amber Copper Brown Black 3										
Aspect	S	L	M	H						
Clarity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head Size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head Retention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head Texture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments >										<input type="checkbox"/>
FLAVOR Malt Hops Esters Other Balance 20										
# Aspect	S	L	M	H						
Malt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Esters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

Murphy's Stout

- BJCP Style 15B Irish Stout
- Murphy's (Heineken – !)
- Edinburgh, Scotland UK (!)
- ABV 4%
- IBU 30-ish?



Break

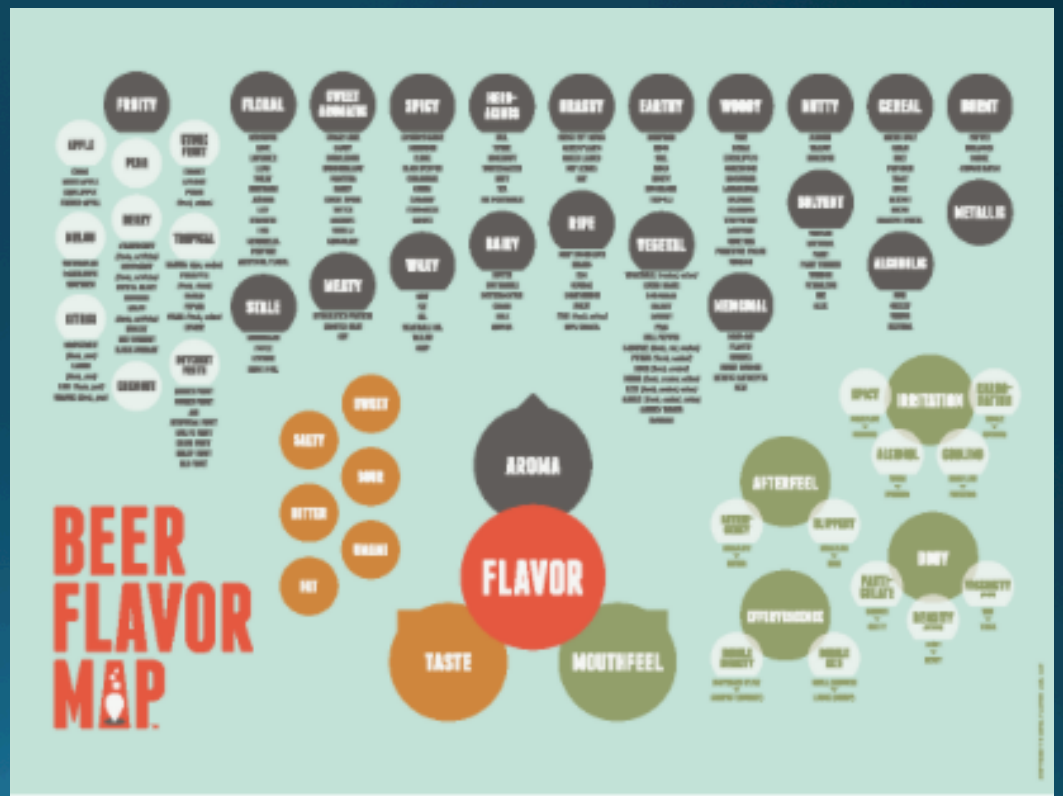
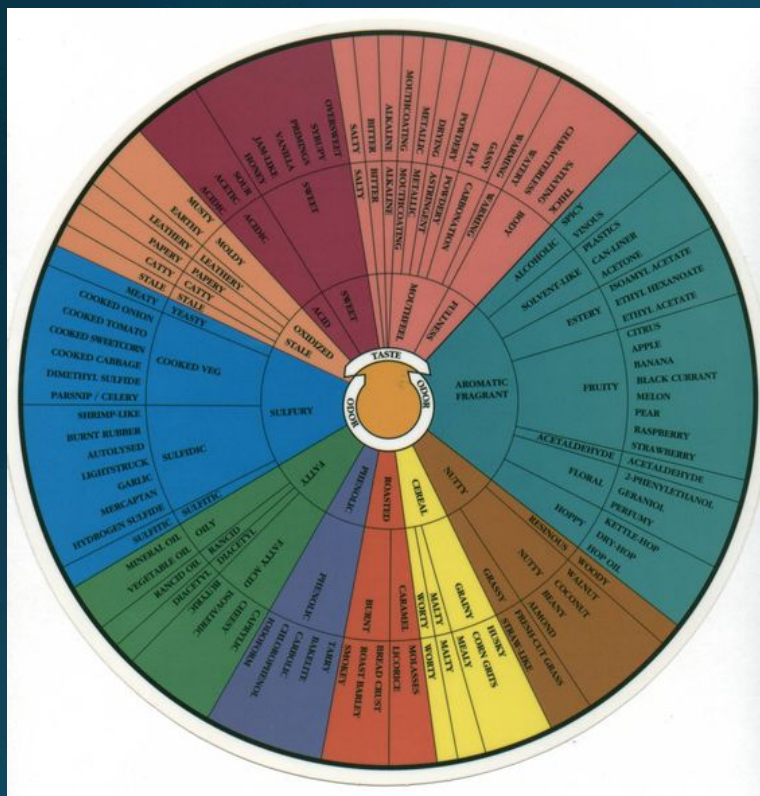
Describing Beer and Troubleshooting

Being Descriptive

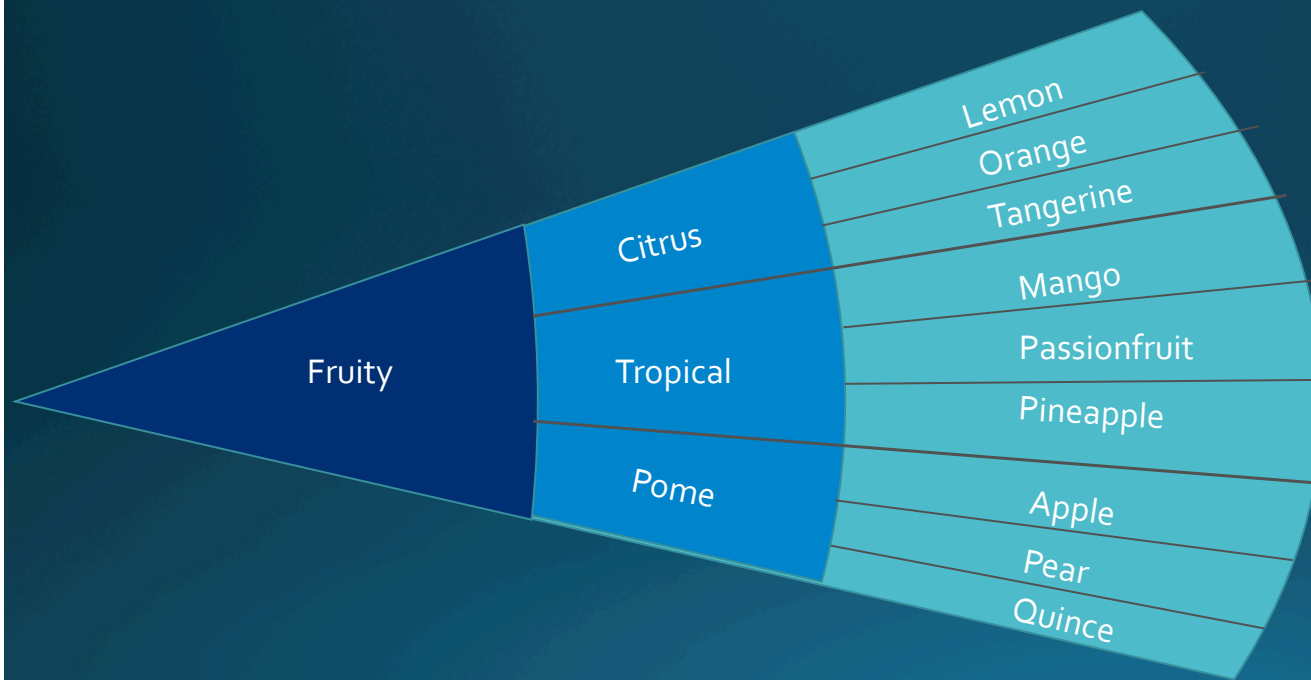
- Improving your perceptions
 - Detection
 - Familiarity
 - Recall
 - Identification
 - Discrimination
- Requires training and experience
- Improving your descriptions
 - Intensity (quantity)
 - Quality (adjective)
 - Perception (noun)
 - Sense (characteristic)
 - Memory it triggers, or value assessment

Example: Medium-low dried cherry aroma, out of place in a lager

Models for Characterizing Flavors



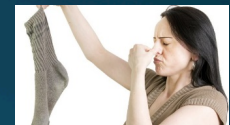
Descriptor Hierarchy



Fruity
Citrus
Lemon
Orange
Tangerine
Tropical
Mango
Passionfruit
Pineapple
Pome
Apple
Pear
Quince

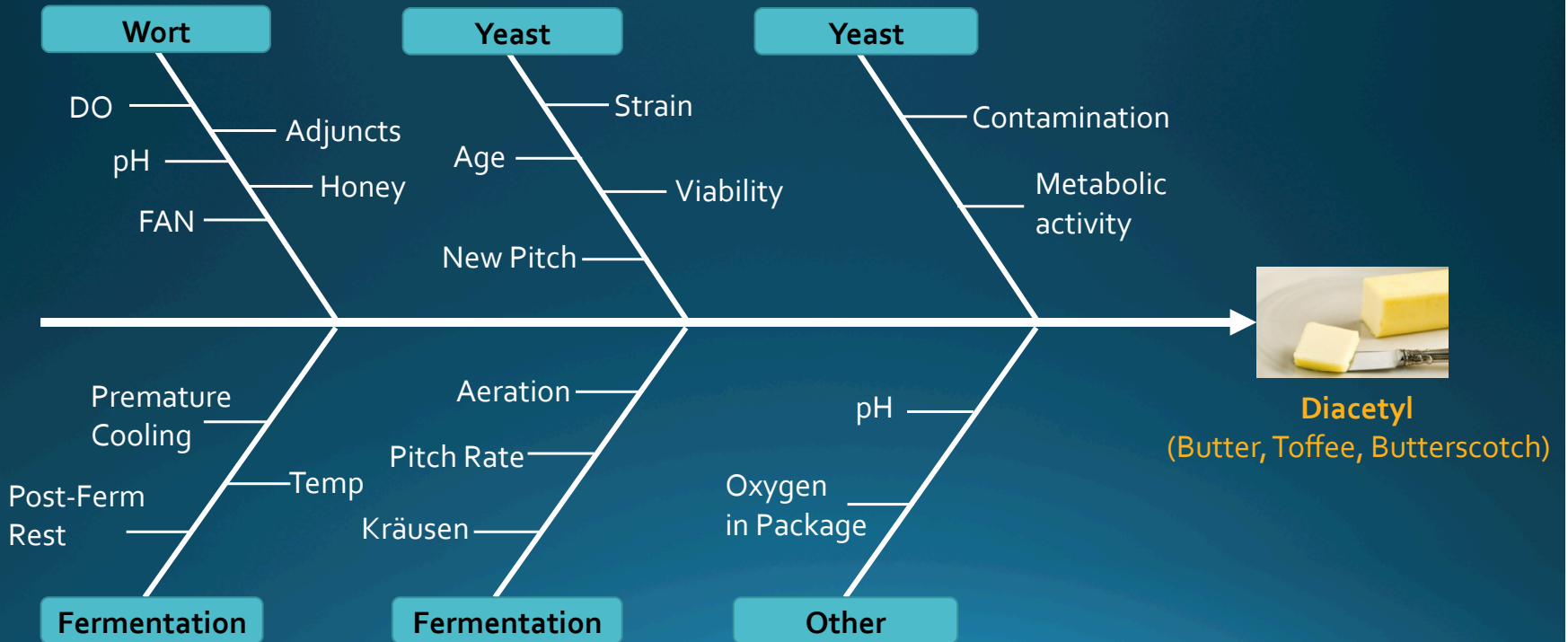
Assessing Technical Quality

- Major question – is it flawed?
- What is it? Identify and describe
- Root cause?
 - Identify source: Ingredients, Brewing, Fermentation, Packaging, Handling, Age, etc.
 - Leverage knowledge of ingredients and process
- Suggest plausible solution
 - Very difficult in a blind judging context
 - Often just an exercise in pattern-matching



Troubleshooting Faults

Think Cause-and-Effect

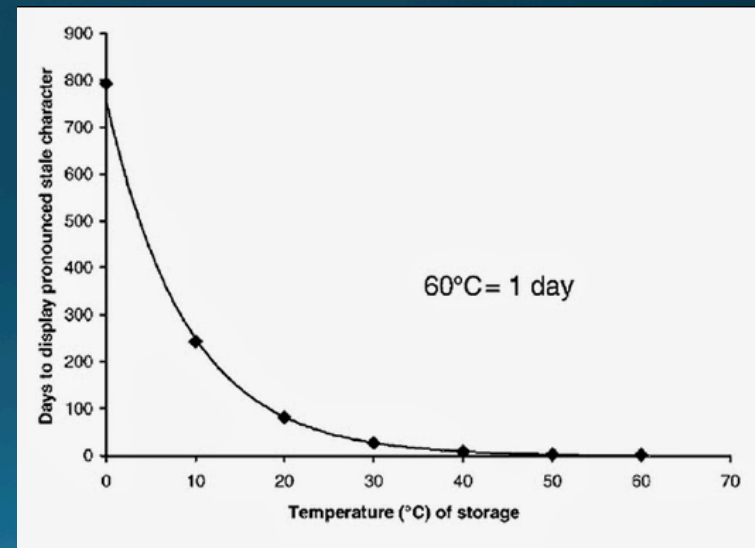
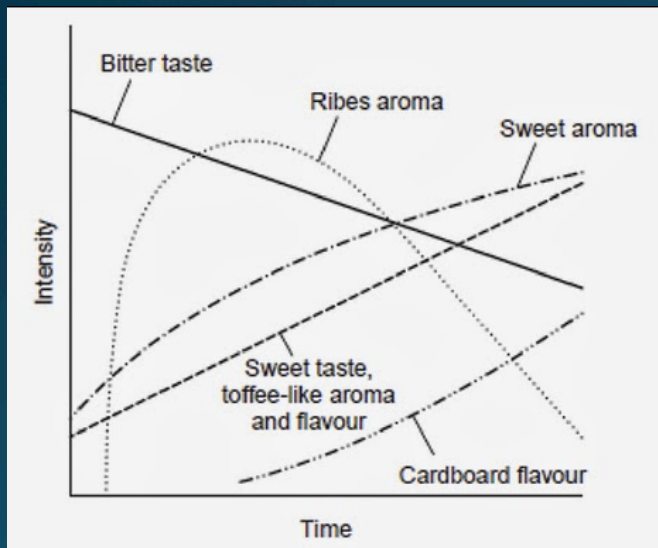


Troubleshooting is Tricky

- A Beer can have Multiple Faults
- An Individual Fault can have Multiple Potential Causes
- A Fault can express itself in different ways over time
- You have to be a Detective
 - Use all Clues
 - As a Judge, do you have Full Information? NO. As a brewer, YES!
- Differential Diagnosis, like a Medical Doctor
 - Try to Rule Out Low-Probability Causes
 - Use other Evidence
 - May Involve Tests, or more knowledge of recipe/process
- Practical brewing experience is a huge advantage as a judge

Oxidation is Complex

- and changes over time and temperature...



Detecting Oxidation

Much more than Paper or Wet Cardboard

- Dullness of flavor
- Muted character
- Color less vibrant
- More brown hues
- Can be cloudy
- May have flakes
- Sweeter taste
- Pale: Honey flavors
- Amber: Caramel flavors
- Dark: Dried/dark fruit flavors
- Hops fade
- Bitterness more harsh

Aventinus

- BJCP Style 10C Weizenbock
- G. Schneider & Sohn
- Kelheim, Germany (Bavaria)
- ABV 8.2%
- IBU 15



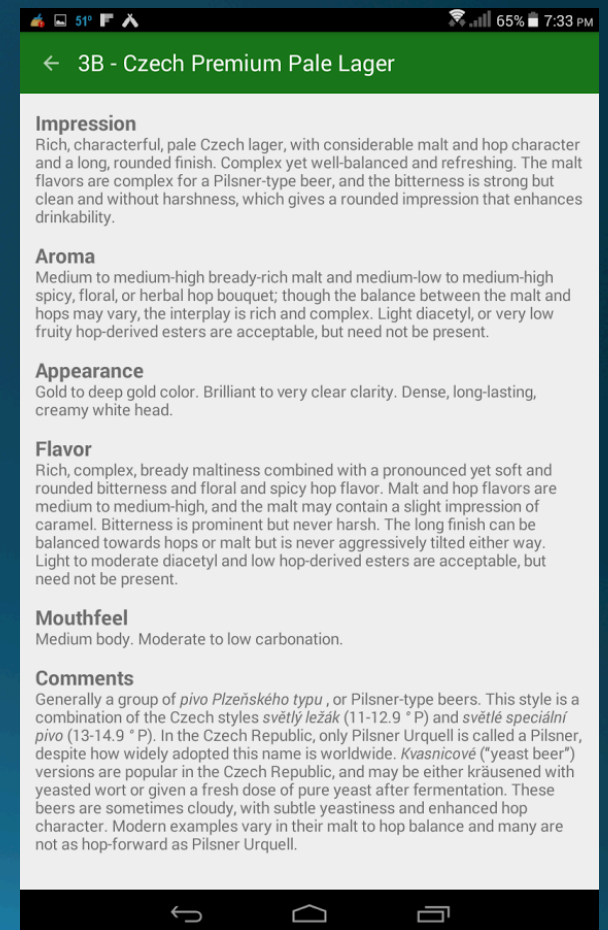
Assessing Beer Style & Commenting

Technical vs. Stylistic Faults

- Technical
 - Related to brewing process
 - Single or multiple errors
 - What most people think of as “faults”
- Stylistic
 - Balance and drinkability
 - Comparison to commercial beers
 - What happens more often

Evaluating for Style

- Understand the essence of the style
 - Overall impression and balance
 - What must be present
 - What separates it from other styles
- Understand the range of the style
 - Don't over-emphasize a single phrase
 - Don't let a single example define the style
- Read everything in context
 - Order and intensity of descriptors
 - Required vs. optional elements



Style-Related Characteristics

- Styles are known and differentiated by:
 - Flavors (intensities and characteristics)
 - Balance (bitterness to other flavors)
 - Attenuation (sweetness or dryness)
 - Relationship of final gravity to bitterness
 - Mouthfeel impression and finish
 - Alcohol level
 - Special ingredients or unusual flavors not present in most beer styles

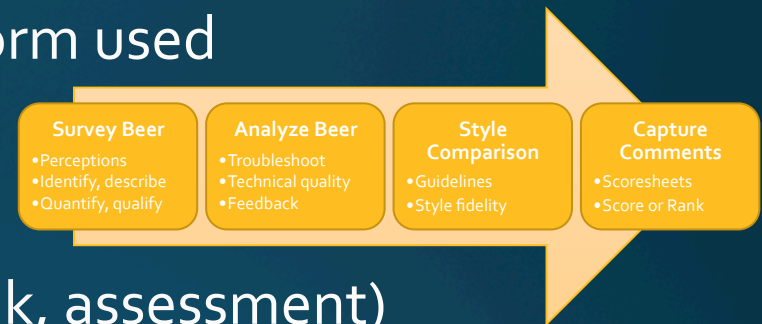
Balance Issues

- Style-Related more than Technical, often
- Might be due to Ingredients, Recipe, Process
- Was the original concept sound?
- Examples
 - Wrong body
 - Wrong finish
 - Too sweet
 - Harsh
 - Wrong flavors




Capturing Comments

- Method matters more than the form used
- Get your information across
- Help the brewer by not guessing
- Justify your final result (score, rank, assessment)
- What you perceived is more important than how to fix



[illegible][illegible]

 GREAT AMERICAN BEER FESTIVAL 2014	Category _____ Subcategory Letter _____	Beer Number _____ Judge Number 218
--	--	--

Great American Beer Festival Judge Tasting Notes

*** Appearance – color, clarity, foam**

Too Light |-----| Too Dark Too Clear |-----| Too Hazy

Low foam |-----| High foam

comments: _____

*** Aroma**

Appropriate |-----| Not Appropriate

comments: _____

*** Taste – sweetness, bitterness, sourness**

Sweetness: Too Low |-----| Too High

Bitterness: Too Low |-----| Too High

Sourness: Too Low |-----| Too High

comments: _____

*** Mouthfeel – alcohol, carbonation, body**

Alcohol: Too Low |-----| Too High

Carbonation: Too Low |-----| Too High

Body: Too Low |-----| Too High

comments: _____

*** Aftertaste and Finish**

Appropriate |-----| Not Appropriate

comments: _____

*** Technical Quality**

Excellent Very Good Good Acceptable Needs Improvement

|-----|

comments: _____

*** Style**

Somewhat Representative of Style

Very Representative of Style |-----| Not Representative of Style

comments: _____

Other Comments:

BJCP (Structured)

GABF

Jai Alai IPA

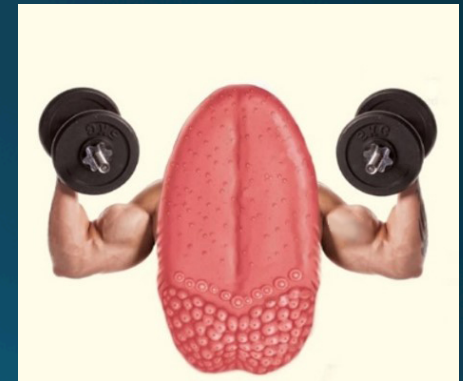
- BJCP Style 21A American IPA
- Cigar City Brewing Co
- Tampa, Florida
- ABV 7.5%
- IBU 65



Building and Validating Skills

Building Skills

- Cross-training
 - Taste other things (wine, food, whiskey, etc.)
- Palate training
 - Learn to ID specific flavors
 - Learn to recognize at threshold level
 - Learn to distinguish flavor from similar flavors
 - Does anything trigger memories? – need to recall
 - Taste range of fresh foods, can you ID blindfolded?
 - If you can ID, try it at lower levels
 - Determine if you have sensory blind spots
 - Blend/dilute
 - Needs repetition and reinforcement
 - Good group exercises



Building Skills

- See how many descriptors you can find in a beer
 - Group exercise
- Doctored beer for flaws
 - Understand limitations
 - No other clues exist
 - Might taste different in other base beers
- Triangle Test
 - Discrimination
 - Identification
- Critical structured tasting = Judging
 - Set aside biases and knowledge of beer (if yours)
 - Evaluate every beer you taste (mentally or written)



If You Want to be a Judge...

- Extensive references at www.bjcp.org
 - Style Guidelines
 - Exam Study Guide
 - Beer Faults
 - Scoresheet
- Practice at homebrew clubs, judging classes
- Volunteer at homebrew competitions
- Take the exam – online exam first, then practical tasting exam



Congratulations, Now Let's Brew Better Beer

