

Testing Tasting: methods assemblages in an online exam

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Abstract

This paper explores the historical contingencies and networks of relations enacted in the Beer Judge Certification Program (BJCP) online exam, designed “to test a prospective judge’s knowledge of beer styles, beer characteristics and the brewing process”. Drawing on the work of John Law the exam is considered as a methods assemblage crafting presences, manifest absences and othered realities. Using accounts from auto-ethnographic recordings and ethnographic fieldwork together with documents, I trace associations from the exam questions and the way they use language to compare beer styles and descriptions. I consider the historical development of these methods of description through the work of Shapin (2012) who explores how these are connected to historic shifts in the way taste, and the tasting body, was understood in the late 18th to early 19th centuries and the orphaning of taste from scientific practice. I then examine how this shift opened changes from a sparse to ornate vocabulary to described the tasted object and the ways that this vocabulary has developed both in connection and in contrast the language of wine. I turn to consider efforts to create devices that standardise this vocabulary and their use for purposes of beer judging in the BJCP. I ask whether the ways that bodies, objects and devices are described and related can be considered to assemble a "community of amateurs" as suggested by Hennion (2004, 2007). I suggest that the reflexive accounts of the participant organisation in describing this as a "program" are more appropriate than the term community. I conclude by considering what contribution an engagement with the concept of a methods assemblage can make to the discussions around tasting and the BJCP, and the broader potentials for networked learning research.

Keywords

Craft beer, actor-network theory, beer judging, sensory assessment, online assessment.

Introduction

36	F	Calibrations beers are selected to be the standard against which entries should be judged.
54	T	Sniff the entry immediately after pouring to ensure proper evaluation of volatile aromatics.

9. Brettanomyces is a common brewery contaminant that is typically attributed to causing what off-flavor in beer?
A) Rancid butter B) Horse blanket C) Sherry D) Grassy E) Green apple

The examples above have introduced some of the core data considered here: questions used in an online exam and devices used to standardise judging and describing beer flavour. How did you engage with them? Could you answer any of the questions? Which senses did you use and which did you not use? Did you try to imagine what rancid butter, a horse blanket, sherry, grass or green apple would smell like? Did you consider finding and smelling those objects to engage with their smell directly? These are some of the issues which I explore in this paper in considering how these questions and devices are constructed, and the contingencies and networks of association that have been assembled to enable testing in this way.

Background

This paper focusses on one event and the discussions and materials associated with it within a longer ethnographic project. The project had three distinct and interlinked aspects. The first a 10 month, blended-learning course in beer judging, the second practices of beer judging in homebrew competitions and the third examinations to achieve certification as a beer judge. The first was an online exam which is considered here, the

second a blind tasting and judging of beers. The data for this paper all relate directly to the online exam which is designed “to test a prospective judge’s knowledge of beer styles, beer characteristics and the brewing process” (Wolfe et al., 2012, p. 25). It is positioned as an obligatory-point-of-passage for prospective judges – they must pass through the exam and gain a passing grade to progress on to the tasting exam and the possibility of certification. This process of accreditation was introduced in the USA by the American Homebrewer’s Association in 1985 as their “Beer Judge Certification Programme” to “certify and rank beer judges through an examination and monitoring process” (BJCP, 2012). The first UK competition judged using their approach was in 2011 with this course and exam certifying the second set of judges in the UK which currently has 25 active judges compared to 4224 in the USA.

The research is approached through an engagement with actor-network theory and its successors, in particular John Law’s concept of a ‘methods assemblage’ (Law, 2004). This idea derives from challenging conventional conceptualisations of what research is and what it does:

The shift is from epistemology (where what is known depends on perspective) to ontology (what is known is also being made differently). It is a shift that moves us from a single world to the idea that the world is multiply produced in diverse and contested social and material relations. (Law & Urry, 2004, p. 397)

Doing research is a part of this multiple production and contestation of social and material relations, research is performative and it serves not to uncover but to produce the realities it describes. This also serves to broaden the understanding of what “method” is – it is not just an approach and choice of “the right methods” for studying and describing phenomena such as the online exam here, but is also a way of understanding the enquiry and its topic. That is to say that the online exam is itself a “methods assemblage” - one which is a

crafting of relations that shape, mediate and separate an object in-here, its relevant context out-there, and then an endless set of out-there relations, processes and all the rest that are a necessary part of the assemblage but at the same time have disappeared from it. (Law, 2004, p. 84)

Law argues that a methods assemblage achieves this through demarcating three sets of relations. The first is a ‘manifest presence’ crafted through the methods which simultaneously separate an ‘in here’ of things made present as a localised context from a second set of ‘manifest absences’ - things which are relevant to the in-here present but have been made absent. Thirdly the assemblage also enacts an ‘othered’ reality: that which is hidden, repressed or uninteresting. The opening questions I posed served to initiate an exploration of these ideas asking you to consider the words that were made present in the questions and devices and to imagine some of the things that were manifestly absent: imagined or actual smells of sherry, grass or green apples. The questions also “other” vast networks of associations and historical contingencies and controversies which are excluded by asserting binary true/false statuses while naturalising and validating this approach to describing the sensory engagement of embodied person and tasted object.

I could engage in a research approach which works with the in-here presences of the online exam questions. I could look at quantitative data of time restrictions and effects on outcomes, the scoring on different question types or the identification of “problem” questions. I could work qualitatively looking at the experience of test-takers, their responses and how they take the test and make use of reference materials. These could then have instrumental benefits and make recommendations for improvements. However engaging with the ideas of a methods assemblage suggests alternative approaches and alternative contributions and it is those I pursue here. I work to trace connections out from the questions in the exam, exploring the contingencies and to consider how tasting and judging are enacted here, and where those enactments have come from. The intent is therefore to explicate not only what is present and taken-for granted as ethnomethodology seeks to do, but also to extend this to consider what is made manifestly absent and othered, drawing on these extensions and reformulations of ethnomethodology’s project from actor-network theory.

How then to undertake this approach? Paul ten Have (2004, p. 171) argues “every ethnomethodological study requires the creative invention of a unique approach to the problems of gaining access to the phenomena of interest and ways to render them accessible to others”. I engage with this here by starting from the online exam: both my experience as an auto-ethnographic account and my screen-capture recordings of the process. I also draw on the accounts of participants from my fieldwork posted to forums or in conversation. I include

documents in connection with the exam: the study guide, a demonstration version of the online test, recommended reference material and the manuals produced by the BJCP. In tracing associations, origins and controversies - the manifest absences of the exam - I draw on Hennion's proposals that "sociology should take the amateur more seriously, even treat him more respectfully" (2004, p. 132). I therefore draw on the accounts of bloggers engaged in primary research on beer from historical sources such as brewery records and where possible the records themselves rather than prioritising or separating scholarship within the academy as occupying a superior place compared to the methods assemblages of these "great amateurs".

The explorations of the data, the selection of cases for consideration, the approaches to coding and code organisation and then tracing associations from the cases are informed by material semiotic sensibilities and in particular the work of Antoine Hennion on taste and sociology (2004, 2007). Hennion proposes that taste is a complex activity of engagement which mobilises multiple elements. He classifies these as "the community of amateurs, devices and conditions of tasting, the body that experiences, and the tasted object" (2004, p.136) and it is the ways that these elements are enacted, connected, organised and related that organise this inquiry. I consider in turn how tasting bodies, tasted objects and the devices and conditions of tasting are constructed, related and categorised in the online exam. I then consider if and how these are can be considered to assemble a "community of amateurs".

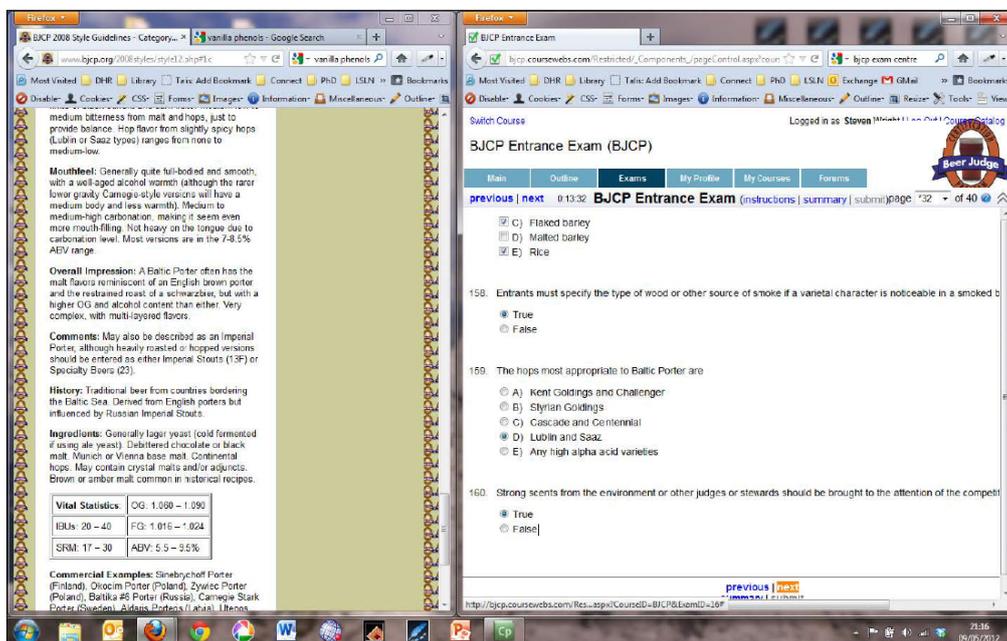


Figure 1: Taking the test.

The on screen appearance of the exam with the BJCP web style guides in the left window and online exam system presenting questions in the right-hand window.

How are tasting bodies conceptualised, constructed and related to the tasted object in the online exam?

Tasting is an embodied experience arising from contact with an object. However within the questions in the online exam references to the body are largely absent. There were very few that addressed me as a test taking subject directly through the word "you" or possessive "your". Sitting at the computer in my office taking the demonstration test only one of the 20 questions addressed me directly, carrying strong normativities around conduct and what shouldn't be ingested before judging:

You should avoid eating spicy or greasy food within a few hours prior to judging (True)

When taking the exam the language of the questions barely acknowledged me as interacting with them. I was sitting using my laptop in my study running screen-capture software to record on screen activity and wearing a headset to record an hour of "think aloud" commentary (see Figure 1). However in the language of the exam I

was rarely made present - out of the 200 questions presented only 2 directly addressed me: one on scoring beers, the other on giving feedback on my overall impression. The questions presented were drawn from the pool of approximately 4000 questions, within which there are only 29 uses of the words "you" or "your". Of those occurrences the majority (23) are to be found within a sub-set of 124 questions relating to judging procedures. In the online exam 20 of this sub-set are presented. (Notably the other 6 occurrences of "you" or "your" are described as ones that "slipped through" by the exam director.) These numbers serve to show that it wasn't just my exam that had few references to me as a test taker, there are very few overall, and furthermore that I had access to all of the questions where there is an intentional addressing of the test-taking subject for consideration and analysis.

So what do these questions have to say about the sensing body? All the questions are strongly normative about what a judge should or shouldn't do - the body is positioned as fragile, easily distracted and limited. However these limits are not to be interfered with

It is a good idea to take a decongestant prior to a judging event to increase your sensitivity to the aromas of beer. (False)

Despite the construction of the body as this fragile instrument it is not one to be adapted through ingesting chemicals or "medication that might influence your ability to judge (e.g., decongestants)". Bodies are sensing instruments, but not only are they fragile and prone to distraction they can also be the source of these distractions. It was in this mode that the only question in my online exam presented the body:

160 Strong scents from the environment or other judges or stewards should be brought to the attention of the competition organizer. True False

This sanction transcends the usual dichotomy of pleasant / unpleasant smells of the body but a sanction against any odours which may distract the fragile sensing body from the controlled and calibrated task at hand – there are comments about avoiding perfumed soaps, deodorants and many of the products used to mask body aromas. Likewise "the environment" is summoned as a consideration with some 'difficult environments' for judging listed including restaurants and breweries due to the powerful smells frequently encountered in those environments. However in practice these are often the places that host such competitions - one of my fieldwork locations was a competition held in a brewery where the aromas of caustic cleaning products and bleaches were almost overwhelming on entry.

Having established where sensing should occur and how distractions should be avoided other references to the body consider how sensing should be done and accounted for. Again these are of limited number within the corpus of questions - only one explicitly referred to the practices of embodied sensing in my online exam:

75. Sniff the entry immediately after pouring to ensure proper evaluation of volatile aromatics. True False

This question is one of those included with the answer in the study guide marked therein as "true", establishing it there as part of the canonical procedures of judging. Smelling is rendered as a process: not a passive reception but an active engagement with an object. Furthermore there is a restricted temporal dimension: this must be done immediately. It is presented as part of a normative "proper evaluation" of a beer that possesses multiple component parts. Smell has been divided here into a physical embodied sensing activity in relation to fleeting unstable properties of an object. These properties of the object are rendered in the scientific language of chemistry but, as we shall see, this language is not to be used to describe these underlying compounds which is to be performed in a different register.

Where does this chemical language come from and how does it act to configure the relationship between sensing body and sensed object? The shift to a conceptualisation of a sensed object as having invisible underlying chemical properties has been explored by Shapin (2011) in connection to shifts in the 18th Century from a primarily Galenic engagement with the humours and description of "qualities" to a very different conception of what elements were with the ascendancy of chemistry as a language describing "constituents". Within the Galenic paradigm, distinct, sensed qualities of imbibed objects - food, beer, wine etc. - were described in terms of sensible qualities that were associated with the four humours: blood, yellow bile, black bile, phlegm. Each

humour was associated with one of the four temperaments (sanguine, choleric, melancholic or phlegmatic) as well as one of the four elements (air, fire, earth or water). Food and drink were categorised in terms of associated sensed property combinations of wetness and dryness, hotness and coldness with the language of both the professional medical and the lay subject shared and closely aligned. While Shapin's work has focused on the language of wine we can see this also present for beer. An early book on brewing practices by Combrune (1762) initially defines technical brewing terms before he dedicates 20 pages to the four elements of Fire (pp13-18), Air (pp19-23), Water (pp24-32) and Earth (p.33), and then turns to the new scientific instrumentation of thermometers. Descriptions of taste occupy only 6 pages at the very end using a limited vocabulary describing only "acid, sweet, bitter, aromatic, austere and nauseous" (p.345). A similarly sparse vocabulary is still found in other books 65 years later with Booth (1829) primarily using the Galenic concept of "agreement" adding only "vinous" (p.28) "old" (p.52) and "mawkish" (p.55) to the taste terms above, however explicit reference to the four elements is now absent.

Both these books make use of insights from "the new chemistry" and show a shift to a chemical vocabulary and the description of foods in terms of chemical constituents. This shift through the mid-to late-18th century and into the early 19th reconfigured the relationship of sensing body to sensed object: the elements change from describing sensed qualities (for example the element of water) to describing chemical properties (wherein water is now understood as a combination of hydrogen and oxygen) which are no longer directly available to the senses. Roberts (1995) explores how this shift affected the education and training of chemists from the "sensuous chemists" of the 17th and early 18th century using their mouths, tongues, noses and fingers to sense properties to the subjugation of such subjective approaches to the adoption of new objective measuring devices. The sensing body became subordinate and its direct sensory evidence erased.

However taste has remained stubbornly outside of this. Despite contemporary development and use of electronic tongues and gas chromatography, tasting today is still done by human bodies with "panel members as measuring instruments" (Meilgaard, 1993, p. 17). The changes noted by Roberts of the subordination of the sensual chemist's body have not applied to taste: "if the gas chromatograph and the panel disagree, one should trust the panel and not the machine (Meilgaard, 1993, p. 30). This indeterminate position, Shapin argues:

made taste a scientific and philosophical orphan. But, at the same time, it made taste a suitable case for connoisseurship. Our modern connoisseurs display their ability to analyze, distinguish between, and assign descriptive predicates to each of the thousands of wine flavor components and to produce seemingly precise quantitative measures of how good "good" wines taste. The vocabulary of taste has accordingly moved from the spare to the ornate. (Shapin, 2011, p. 46)

As with wine, so too with beer, with the BJCP guidelines producing forms and systems for inscribing these precise quantitative measures along with descriptive terms either as checklists of flavour terms or lined spaces on a sheet for a judge to provide a "a complete evaluation of the sensory aspects of the entry and how those aspects relate to the style guidelines". And it is to the ways this is to be accomplished that we now turn as we consider how the online exam constructs and positions the object.

How is the tasted object constructed, categorised and positioned relative to the tasting body in the online exam?

One of the achievements of the BJCP style guides is to establish criteria by which different objects can be made comparable. It describes beers in words and numbers and constructs its categories through contrast and continuity. Beers are no longer sensed fluids but examples of a type or class of fluid. Their properties are broken down into aroma, appearance, flavour, mouthfeel and synthesised into an overall impression. How these are constructed, categorised and translated into testable propositions in the exam through a particular language is therefore worthy of consideration – tracing what is made present and the manifest absences that are smoothed over or set aside in this process.

Let us consider first a question which asks the test taker to compare a set of qualities of two styles:

49. Check all that apply. A Dry Stout and a Foreign Extra Stout have what similar malt aroma characteristics?
A) Coffee like B) Toffee C) Roasted malt D) Chocolate like E) Biscuity

This question proposes that beers can be classed into styles and differentiation made between them. Both are types of the “stout” style. On being presented with this question I immediately said aloud and clicked “roasted malt” before finding the stout page on the online style guidelines (see Figure 1 for screen layout), I mutter “ahhh I can see how much of this exam is just a memory test” I scroll down the page and select all the properties mentioned in the aroma section for foreign extra stout: “coffee, chocolate, roasted” then scrolling back up to cross-reference if these appear for dry stout as well, they do so I leave them checked and move on.

These similarities are to be found here in descriptions of their aroma, which is done with reference to other taste objects. This is what Shapin (2012) calls a referential vocabulary, which is the ornate approach enabled by the “orphaning” of taste from philosophy and science, but one which has seen new philosophies and sciences assemble around and through it. This has seen extensive work within sensory science to achieve standardisations and specific methods which I shall turn to investigate in due course. In contrast to describing Galenic qualities in terms of hotness/coldness or wetness/dryness we now find instead references to non-liquid foodstuffs - biscuits, coffee, toffee and chocolate - as well as an unfermented beverage: coffee. These show a strong continuity with contemporary wine vocabulary, however item C is anomalous. The style is defined not only in terms of reference to other foods but also by reference to a distinct ingredient. This is a marked difference from most wine vocabulary where technical terms of the ingredients in terms of grape varieties or additives are little used in description and excluded from Lehrer’s (2009) linguistic analysis of wine talk. The language of beer, by comparison, is replete with references the ingredients as flavour references, here “roasted malt”. The significance of this lies in using that particular ingredient, aroma and flavour as the way that the BJCP style guides differentiate two classes of styles: stout and porter. In this framework stouts have a common feature of roasted malt, made present and reinforced through use as a testable proposition.

But such a differentiation between these classes and identifying continuities is only locally defined. Controversies over such a differentiation are made as manifestly absent as the flavour of roasted malt is made present. The blogger and amateur historian Ron Pattinson, who collates, analyses and publishes historic brewery records makes a forthright objection to this sort of differentiation quoting from historic sources that

"Stout, brown stout, &c. are varieties of porter, differing only in their strength." [A Cyclopaedia of Practical Receipts by Arnold James Cooley, 1845, page 190] "... brown stout, which is the strongest porter made in London, contains 6.8 per cent, by measure, of alcohol" [Encyclopaedia Britannica, 1824, page 488] (Pattinson, 2008).

To further his claim he enrolls these historic sources and then uses them to support his criticism of the way the BJCP make such differentiations, arguing that:

Both sources say unequivocally and explicitly that Brown Stout is variety of Porter. Now let's see - which sources do the BJCP quote? Oh silly me, I was forgetting. They don't provide any references to back up their claims, do they?" (Pattinson, 2008).

I suggest that the differentiations in the style guides enact categorisations and that these enactments are localised. This suggests that rather than one single style guide that is taken “out of context” by detractors there are multiple style guides. One is being translated into comparable sets of testable true/false or multiple-choice propositions. These are contingent on the only the referential vocabulary to external objects that now dominates wine talk. However it is also differentiated from that by enrolling another vocabulary of specific ingredients and their flavours that are used in creating the tasted object – here through roasted malt. I have not yet found an appropriate term for this internal rather than external referentiality and invite the reader or reviewer to consider this and engage in the inquiry by making suggestions. Another very different style guide is being retrospectively applied to beer history styles and for Ron it is failing to explicate the connections and inscriptions it uses to achieve this. But in this undocumented history, as we have seen, tasting was understood and engaged with in very different ways which are othered in both of these accounts.

These different guides and the tensions, roles and applications of the agglomeration of words and numbers are effectively black-boxed through their performance as a question where the test taker must simply “select all that apply” for one mark. At a stroke the controversies, histories and the contingencies of how styles came to be named, differentiated and the ways they can be described have been made absent, yet also manifest in the term "roasted malt".

How are practices and conditions of tasting structured and standardised through devices?

In exploring the relationship of tasting bodies to tasted objects we have encountered many of the conditions of tasting. We have encountered how a referential vocabulary emerged from historical contingencies and shifts in our understanding of and relation to tasted objects. We have explored how a vocabulary is constructed using the external references to other tasted objects that marks wine talk but also references to the more complex assemblage of ingredients used to make beer and descriptions of these distinct flavours. How then do these words function? How are they selected and standardised and what devices are used to accomplish this? These are the questions and normativities to which we now turn.

9. Brettanomyces is a common brewery contaminant that is typically attributed to causing what off-flavor in beer?

A) Rancid butter B) Horse blanket C) Sherry D) Grassy E) Green apple

We have transitioned from describing properties of a beer to the diagnosis of flaws, the smells are now “off-flavors” associated with issues of contamination which may be associated with one of the listed referential terms. Whilst many will have had exposure to rancid butter, sherry, grass or green apples it is “horse blanket” that is the term to be associated as the aroma descriptor here. I answered it correctly in the demo exam despite the fact I have never knowingly or consciously smelled a horse blanket. How then did I know this term was associated, and how are such linkages of referential terms achieved and standardised in this way?

The beer exam study guide is emphatic that it is this ability that is essential for a judge:

Regardless of a judge’s ability to detect various odors in beer, that ability is useless if the judge cannot use accurately descriptive terms to communicate information to the brewer. Hence, it is important for beer judges to build a vocabulary for describing the variety of odors. Meilgaard (1993) presents a useful taxonomy of beer-related odors. (BJCP Exam Study Guide, p18)

If we follow this connection we find in the original paper outlining this taxonomy Meilgaard, Dalglish, and Clapperton (1979) proposing that “the arguments for an agreed flavour terminology are the same as those for an agreed chemical terminology or biological terminology or for a common scale of temperature” (p.47). Their organisation of the taxonomy onto a wheel design has resulted in the publication of multiple versions of varying complexity - see Figure 2. None of these wheels nor the taxonomy include the term “horse blanket”. Instead the chemical constituents attributed to producing these smells are used: “isovaleric” and “caprylic”.

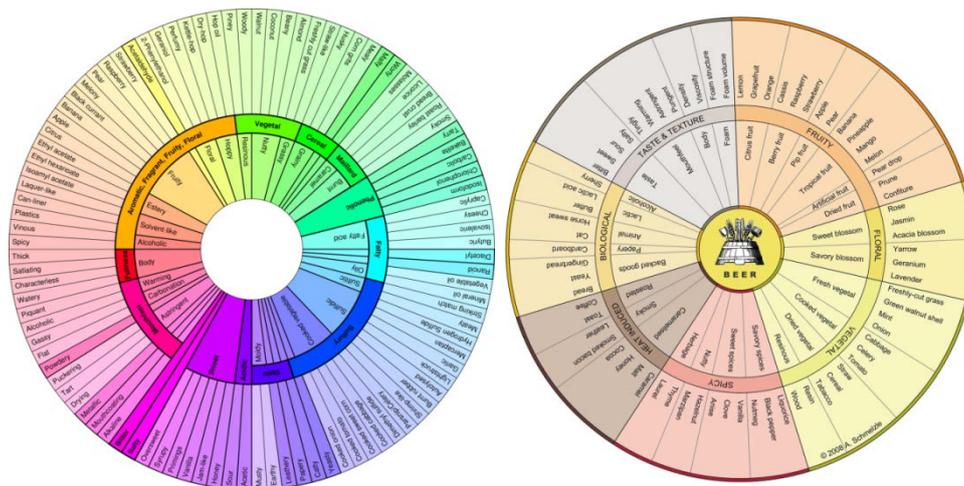


Figure 2: Policing the boundaries through materialising standardised vocabulary:
Left - A Versions of the Beer Flavour Wheel developed by Meilgaard, et al. (1979)
 (full-size available from <http://www.beerflavorwheel.com>)
Right - the beer aroma wheel developed by Schmelzle (2009)
 (full size version available from <http://beeraromawheel.com/>)

This shift to a chemical terminology challenges the assertion that the wheel provides a “comprehensive system that will enable flavour researchers, brewers and marketing professionals to describe and define each separately identifiable flavor note in beer” (Meilgaard, et al., 1979, p. 47). Some of the tensions glossed over in that statement have been considered with regard to the wine aroma wheel by Ann Noble who suggests that “Although descriptive terminology is precise and facilitates communication about flavour, precise terms cannot be used on wine labels. “Asparagus” and “bell pepper” are not appealing to most consumers shopping for wine” (Noble, 2006, p. 35). These tensions are the precursors of a recent initiative to develop and update the beer aroma wheel to create one “that is structured according to sensory standards. Even people who have no knowledge of the way flavours in beer develop can use it to describe sensory perceptions” (Schmelzle, 2009, p. 26).

The term "horse sweat" does appear on this new beer aroma wheel. However this cannot account for its institutionalisation as the dominant reference term for the aroma of Brettanomyces, one that features in the glossary of beer review website Ratebeer (2013) as well as other online glossaries. It appears in blogs and forums posts where terms are argued over as snobbish, inaccurate or arcane. Beer culture historians Boak and Bailey present the term as evidence of “The Stale Language of Beer” arguing:

People will describe ‘horse blanket’ when they really mean ‘that thing you get in that other beer that Michael Jackson said had a horse blanket character’. Who, [apart from Adrian Tierney-Jones](#), has actually smelled a horse blanket? Seriously? (Boak & Bailey, 2013)

Their account links us to the apparent originator of the term – and the person who is attributed as the originator of this complex classification of beers into multiple national styles: the late Michael Jackson. His books are included as recommended reading in the BJCP study guides whilst the 2008 version of the style guides opens with a full page dedication in memorium to his death in 2007 with a dedication from the BJCP president that:

Michael Jackson was the most influential authority on beer the world has ever known. He has inspired generations of beer judges with his passion, knowledge and gifted prose. His books remain definitive references on beer styles and will forever be found on the bookshelves of anyone serious about beer (Gordon Strong in BJCP, 2008, p. ii)

The exam question translates his work from “gifted prose” to “a testable propositions” and establishes it as the orthodoxy, however despite this widespread use of the term does all this work to render standardisation hold together? If so we would expect to find this term in use in other devices used in tasting and judging by the BJCP such as the checklist version of the beer score sheet. However of the proposed answers only one appears on the checklist under the section for flaws where we find “Grassy”. And rather than “horse blanket” we instead find the abbreviation “Brett.” with tick-boxes in both an aroma and flavour sections. And so we find some of the limits of a referential vocabulary if the reference term is less familiar than the property it is taken to indicate. Beer writer, journalist and blogger Martyn Cornell puts it thus “I doubt more than one in five hundred beer drinkers knows what a horse blanket smells like, and I bet very, very few beer writers who steal that description from [Michael Jackson](#) have ever sniffed a horse blanket either” (Cornell, 2012)

In drawing attention to the standardisation, repetition and familiarity with a referential term, we segue into the final matter of concern: in what ways do these terms and work on their standardisation assemble or challenge the formation of an aggregate we could meaningfully describe as a “community of amateurs”?

How are bodies, objects, devices and conditions of tasting related in the online exam to assemble a collective? How should we describe this collective of amateurs?

A principle of an actor-network approach and account is not to invoke a priori "social" categories. Rather than assert there is a community of amateurs, analogous perhaps to a “community of practice”, it is to see practices as ongoing achievements and collectives as contingent emergent effects of those practices. It is a question, not a statement: "is there collective work being done? How is it reflexively described by those doing it?" rather than “what practices are an existing, defined, 'community' doing?”

The term "community" appears only once in the assembled documents and guides for prospective and qualified judges: "Judges represent the BJCP and should be able to explain the program to potential judges and others in the homebrewing community".

The idea of a program embedded and entangled within a more loosely defined broader community is both an appropriate and a useful metaphor - and I argue that this is more useful than the aggregate of community with its theoretical baggage, implicit anthropocentrism and multiple conflicting interpretations within networked learning research. We have looked at how within this program bodies are aligned and organised. They are also ranked and allocated experience points for engaging in sensory practices with tasted objects through judging or assisting in exams. The bodies are positioned as standardised sensing instruments, to be calibrated through and their outputs recorded. The tasted objects are networked through a referential vocabulary enrolling a myriad of other objects to define them. The boundaries are subjected to fine-grained controls with either 96 or 137 terms. There is development work on a vocabulary project to help further standardise the descriptive language used, further configuring and standardising the relationship of body to object and introducing another device. The conditions of tasting are closely specified and all of this detail is translated into nearly 4000 propositions to be delivered remotely as an exam of 200 questions.

"Program" captures this complexity and the efforts to introduce standardisation well - there are inputs of liquids, transformations and translations using standardised languages resulting in outputs of rankings and referential words. There are priorities of efficiency, consistency and objectivity. This is a complex methods assemblage indeed. A program of judging describes it far better than a community of practice, as we should expect the reflexive accounts of the members serve better than the pre-defined aggregates of sociology.

Conclusion: what contribution can this make

In this paper I have introduced and worked with ideas from actor-network theory focussing on John Law's idea of a "Methods Assemblage", I have shown how this is not only a way to understand research methods but also the topic of enquiry and the interaction and performativity of researching a topic. By looking at an online exam about tasting and judging beer as a methods assemblage I have shown how one can work with the topics of exam questions to consider what they make present, manifestly absent and what is othered. In doing this I have explored the historical contingencies that have enabled this methods assemblage to come together in the way explored here and in an exam taken online from the UK in 2012. I have considered how tasting beers can be formulated as an information infrastructure enabling translation into testable multiple choice propositions to be administered online. I have shown from a selection of examples how these local enactments are connected, but make these contingencies manifestly absent or othered. I have also shown how the accounts of the actors are reflexive constructions for describing the topic of study and should be treated seriously as they are better suited than importing a priori categories or models such as a community of practice or an activity system.

I hope I have succeeded in engaging you as a reader with this approach, I hope it has raised questions, and I wish to deal directly with one of the most important it may well have raised: "so what?". By not engaging in research with direct instrumental applications what contribution could this approach make?

I suggest that this does have a contribution to make, perhaps not directly to the online exam but to shifting the terms of the debate around the projects of standardisation and classification. By exploring and considering the creative histories of selected enactments of classification, rather than adopting a singular notion of their "accuracy", I have sought to describe and demonstrate a few of the myriad methods by which standards overflow the imposition of boundaries and extend far beyond their origins. The BJCP style guide is used far beyond the narrow confines of the program - they are a reference system and vocabulary known by professional brewers (Steiner, 2009) and part of the global surge of business and interest in "craft beer". Much more than a mere "misunderstood necessity" provoking "strong responses [which] are generally either based on a misunderstanding of the purpose,... observations of them being used incorrectly, or a dislike of the persons or group making the guidelines." (Strong, 2011, p. 157), I argue here, echoing Law and Urry, that the style guides multiply producing diverse and contested social and material relations. However this productive, performative role is neither acknowledged nor informing the often-acrimonious debates. By acknowledging the historic contingencies they draw on as well as the multiple enactments that these guides are engaged in - producing taste realities, producing styles and producing histories - the terms of debate could be shifted. Instead of repeating arguments and attempting solutions though tighter controls of context for use of revisions this would be to write-in multiplicity and contingency. Rather than attempting singular standardisations and stable definitions in

projects such as the ongoing wiki-based BJCP vocabulary project that acknowledge the historical shifts and multiple ways of describing and enacting tastes rather than creating a single list of acceptable standard terms and referents. An alternative to policing the boundaries of presence and absence through increasingly tightly controlled definitions and ways of using them would thus be to engage in a more generous project enabling and recognising multiplicity in description rather than adopting a singular paradigm of accuracy. And this could serve to recast tasting from attempted singularities and to rejoice in multiple experiences and enactments of the interaction of tasting body and tasted object and the creative and diverse ways to describe these.

Within networked learning research this engagement with a methods assemblage allows us to consider the localised enactments of these. Rather than looking at whether or how a device, tool or technique (such as the multiple choice online exam considered here) is ‘enhancing learning’ it invites us to consider what is imported with such a device: what is made present but also to what is made manifestly absent and what is othered. This is not to bring in critical realism by the back door and looking at what is obscured from the actors but visible to the superior analyst, instead it is a project to trace associations from local enactments using and taking seriously the terms, understandings and accounts of those actors. These explorations, which acknowledge the performativity their engagement to make and shape these realities, can then utilise them to identify places to intervene and consider what we wish to be made present rather than merely accepting or describing what is enacted prior to this engagement. This, then, is to engaging ourselves as researchers in and with our networks as learners in an ongoing reflexive process of consideration, construction and production of these realities.

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