Learning to smell: A pragmatist view on perception

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My research has an STS background: I am interested in the different ways objects ‘exist’ within collectives.

Most of my work has to do with controversies about 'qualities' because these conflicts can be understood as conflicts about the ways objects exist within collectives.

As per Davids instructions, I will draw on the article “Learning to Smell,” which I published in *Senses and Society* at the end of 2019, and after a first ethnographical part, I will develop the argument on perception.

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I apologize for my English, which is not as good as I would like. This is not just a formal introductory apology. The events and happenings I describe need a precise choice of words. And I will surely make mistakes and involuntary jokes.

If you do not understand me, please ask for clarification. I will try to explain to you what I mean, and together we will find the appropriate words.

Transparent 1. The issue

In her article "The Body We Care for" published in *Body and Society* (Despret, 2004), Vinciane Despret explains that "to have a body *is to learn to be affected."*

- ⇨ Yet, do we have to **learn** to be affected? Aren't we already affected?

Take a sip of the beverage you keep next to your computer. Do you perceive anything?

➔ Of course, you do.

So why should we learn to smell if we all already smell and taste?

Even more troubling:

- ⇨ Smells are something that happens…
- ⇨ **[CLIC]** So how can we learn it if we neither *perform* smelling nor "know" how to do it apart from putting an odor below our nose?

There are nonetheless smelling and tasting classes—just think of those for wine.

➔ Such classes aim to **teach tasting and smelling** and, therefore, to change your perception.

So, what does such a change consist of?

Transparent 2. Smell and taste learning classes are…

There is a short list of ready-made answers:

1st. One is that perception changes could be just deceptions.

2nd. Second possible answer: Tasting classes can organize an illusion of apprenticeship that nonetheless would foster some social networking.

3rd. Thirdly: Pupils may just learn how to use 'proper vocabulary', with words functioning additionally as signs supporting social distinction.

The issue with such claims is that they exclude the **experiential** dimension of perception.

They reduce smells, tastes, and, more generally, perception to a tool for sociological networking and distinction.

So again, what does the change occurring in tasting classes consist of?

⇨ There is some empirical work on perception learning.

Articles may view feeling or sensation as an acquired social disposition, that of a scientist (Jaber and Hammer, 2016), a lawyer (Heath and al., 2017), or a protestant (Scheer, 2012), for instance.

Perception is often confined to the restricted sense of emotions (Groves, 1995), learning to feel at home (Marquardt, 2016) or tired (Lenaert and al., 2018), to fear snakes (Mineka and Cook, 1988) or anything else (Van Rythoven, 2015), to be at ease (Hansen, 2016) or angry…

Such works seldomly concern sensory perception, in its narrow 'physiological' sense.

⇨ In this case, learning is generally understood as the socio-biological process of acquiring taste or smell preferences (Zentall and Galef, 1988).

Otherwise, studies detail or compare tasting environments and devices, the tasted samples, the unrolling of the exercises, their ensuing tiredness, and the variety of the resulting answers… (Stevenson, 2001).

They can also comment on the historically variable emphasis put on perception learning (von Hoffmann, 2019).

But none of them explain *how* we learn.

[CLIC] I propose to focus on pedagogy, which is the way teachers monitor the advent of the result they expect.

Let's enter the classes and see what happens there.

Transparent 3. Empirical analysis of training

Empirical analysis will lead us to examine a few topics:

⇨ the **first impression** while smelling,

⇨ the **generation of uncertainty**,

⇨ and then, the **reverse generation of certainty** with a look at

- different olfactory lexicons developed for wine professionals,
- and in particular at the Field of Odours™, which was the tool used by Jaubert, the teacher of my 'nose' training classes.

⇨ Finally, we will take some time to dwell on the familiar notion of "paying attention"

Transparent 4. 1/5. Contrasting two tasting devices

Years ago, I attended a short training for noses—that is, experts in smell.

Pupils were all smelling odors in a very standard classroom.

I carefully noted, as an auto-ethnographer, all that was happening during the class, all the changes that would occur to me, and the others' comments.

Just one remark: After the first morning session, we all listened to the teacher explain how perception works; He outlined the usual representational theory, starting with stimulus reception and the subsequent signal transduction all the way to the brain.

➔ This was, curiously, totally useless as there was no link between this theory and the content of the smelling classes.

[CLIC] Some months before, I had been working with a **naïve consumer panel**.

Strangely enough, the naïve consumers' sessions took place in a sensory lab and used blind tasting, whereas the expert nose classes did not.

➔ Here, the link between the representational theory of perception and the layout of the tasting device was much more obvious: the sensory lab design and blind tasting aimed to protect participants' perception from undesired "influences."

But there was another difference.

The firm employee who had been running this naïve panel for years and years was extremely attentive to one point:

- she was mostly interested in gathering the "***first impression***" of the attendees.

By contrast, there was absolutely no interest in this "first impression" during the nose classes; at best, it could be seen as something to rework.

What did this "first impression" consist of?

The naïve panel leader described it as a kind of immediate perception, which the participant would experience "without thinking about it."

She greatly feared that participants would start questioning their answers.

She said that once we started thinking about them, the answers would become volatile and much less reliable.

She tried to preserve perception as an **immediate "happening,"** a sort of perception that imposes itself on us.

- It was this perception that so 'obviously' occurs and for which we concluded in the introduction, that any training seemed off the subject.

But the fears and cautiousness of the panel leader also suggest that this happening is fragile and susceptible to reflexive erasure or change.

Our initial statement, therefore, needs to be reformulated.

• As a happening, perception **cannot be** altered… ➔ Still, under specific conditions—and the above case suggests reflexivity—perception may also lose this feature.

➔ But in this case, what does perception consist in?

To answer this question, let's turn to the nose training classes.

Transparent 5. 2/5. Learning to smell

As I just, said our olfaction teacher was not at all interested in the perceptual 'happening', which we have called the 'first impression', because he precisely wanted to operate on perception and transform it into a performance, an action.

What did the teacher do to avoid perception from being a 'happening'?

He cast doubt on this 'first impression'.

Thanks to a small series of guessing tests in which we all made mistakes, we started to distrust our 'first impression', think reflexively about it, and question it.

The effect was what the naïve panel leader feared: perception became elusive, moving, uncertain…

- "It reminds me of orange. Could it be a kind of citrus… or another fruit? Or herb? or…?"

Sometimes auto-suggestion driven by some word would stop the olfactory wandering:

⇨ "Oh. Yes, coriander!"

Some kind of behaviorist 'aha effect' would occur and all of a sudden restore the immediacy of perception.

However, it might still not have led to the teacher's expected answer, so the same destabilizing and re-stabilizing could be relaunched until one gave the expected answer.

And here again, the 'aha effect' might have occurred — 'of course, it is jasmine! How did I not smell it?'

⇨ **Here, one could see doubt raising** as a sort of **ritual practice** that would make the teacher's learning performative[1].

But I am not sure that this learning could be seen as a ritual. Additionally, it was **not performative**.

⇨ Its <u>stabilizing effect was not mechanical</u>; sometimes, the solution induced no such aha effect — "<u>Jasmine? Really? Not for me!"</u>

[1] Regarding rituals, Harkness, Nicholas 2015. The pragmatics of qualia in practice. *Annual Review of Anthropology*, 44**,** 573-589.: 583 underlines in the conclusion of his survey of pragmatics of qualia that such rituals are still in need of description:
"Third, insofar as practices are oriented to and anchored by ritual sites of authorization that demarcate and valuate social space, more ethnographic research is needed on the way in which qualia across different modalities are brought into ritual alignment as (iconic) indexes of the same quality (e.g., softness, purity, manliness) within ideological frames of evaluation (see the above quote from Munn 1986). An ethnographic approach that considers the pragmatic linkages among all three—awareness, language, and ritual—will have much to contribute to our comparative anthropological understanding of the 'feeling of doing' and the broader cultural organization of sensuous semiosis."

Transparent 6. 3/5. Re-stabilizing smells

Doubt and questioning can make perception uncertain.

Yet, *learning to smell* supposes that this **uncertainty will soon convert into certainty**.

➔ But this is not enough.

Learning has a normative connotation: the move from uncertainty to certainty cannot be left to chance: it has to be **driven, and re-stabilization has to be controlled**.

- ⇨ Expert taste and smell vocabularies offer a range of tools for this re-stabilization.

[CLIC] Lenoir's method consists of a list of odor names [on the left of the slide], and each name is associated with a numbered reference vial.

- ⇨ The odors in these reference vials are guaranteed to remain identical for several months if well-kept. This enables the possibility of collective learning.

Here, the re-stabilization of the smell involves repeatedly associating each vial odor with its name or number.

- ⇨ It is **limited to the odors contained in the book**.

So, what about odors *not* included in the original odor set?

- ⇨ You can expand the list by adding new reference vials to the odor set and their associated names to the list.

[CLIC] *Le nez du vin* allows such progressive enrichment. You can start with 6 vials, then 12, then 24.

[CLIC] This is the largest collection of odors of *Le nez du vin.*

It includes 54 vials.

The list is quite long and not so easy to memorize.

It is just like with colors: with 7, it's easy. With 54, a bit less so…

To support memorization, as with colors, a solution consists of grouping the odors by category.

This is what Lenoir did in later editions of the book.

[CLIC] retour

[CLIC] Just like Lenoir, Ann Noble and her colleagues were concerned with improving wine language.

They selected the Wine Wheel lexicon, which they structured in classes (Noble and al., 1984).

As you may notice, the categories are similar between Lenoir and the Wine Wheel: vegetables, fruit, plant, animal, spicy…

But these categories are semantic rather than olfactory.

Vegetables hold similarities to gardening practices and botany. Isn't it doubtful that their odors follow this same classification?

[CLIC] retour

Odor references

Noble, as well as Lenoir, wanted to standardize odor vocabulary by selecting not only a definite lexicon but also the meaning of the words.

- ⇨ This is why Lenoir's book includes odor references.

[CLIC] Three years after publishing the Wine Wheel, Noble and coauthors published a new article providing odor references for each word of the lexicon (Noble and al., 1987).

The authors listed recipes for the fabrication of an odor reference for each lexicon item.

You first had to choose a standard 'flat' wine and then introduce additions to it for each odor: a definite amount of crushed raspberries for 'raspberry', sauerkraut brine for 'lactic', and some soap for 'soapy'.

- ⇨ Of course, they did not reach the standardization achieved by Lenoir, and I am not sure anybody ever prepared such odor references again.

Still, Wine Wheel references had the advantage of being 'contextualized': this second article provided a reference for a 'pear-odor-in-wine' whereas Lenoir required individuals to relate the *pear reference* odor to a *wine pear* odor.

Lenoir's method included another difficulty: he resorted to ordinary vocabulary and tried to transform it into **a perfect lexicon**, a **collectively-shared code**.

- ⇨ This meant a drastic selection of odors compared with the huge number of odors you may experience in wine.
- ⇨ This included also for each odor name, pear for instance, the selection of one source odor and the rejection of all possible other pear odors.
  - He tried to soften the arbitrariness of such a selection through a well-considered choice for each odor reference (see appendix 1).
- ⇨ Nonetheless, his code could only contribute to building **a tiny reality**.

The Wine Wheel (without odor references) avoided this difficulty by only **gathering odor names**.

- ⇨ The word 'pear' can refer to a much larger variety of pear odors. It is therefore much less reductionist regarding reality.
- ⇨ However, the Wine Wheel lexicon is consequently, like any language, imperfect, hosting miscomprehensions, homonyms, and synonyms marring collective communication.

[CLIC] retour

Transparent 7. 4/5 Jaubert's field of odors

Jean-Noel Jaubert, the teacher of my smell classes used his own method.

➔ His training was structured by a mapping of the odorous space.

At first, exercises were similar to Lenoir's.

He gave us an odor kit: **a case containing numbered reference vials**.

[CLIC] The odor kit ➔ The odor kit

Each vial contained one purified single molecule diluted in one same solvent.

Some of the numbered vials evoked precise contents: almonds, vanilla, flowers or butter.

Others were 'unknown'; they **did not smell to anything** in particular.

[CLIC] retour

Then, the teacher selected seven vials from the kit, which he called the 'odorous poles'.

[CLIC] Odorous poles ➔ The seven odorous poles

- ⇨ They were said to be **major representatives** of the different families of odors that structured his odor space.

These **odor families** were not odor name classes as in Lenoir's and Noble's lexicons.

- ⇨ His odor space and families were built out of a huge number of 1 to 1 comparisons of odors.

Poles were then selected for their great one-to-one difference and formed the skeleton of his odor space.

We started learning to recognize them repeatably.

[CLIC] retour

'Drawing' a continuous space

Slowly, he added new numbered vials and the association of each vial to its right name **became more difficult**.

➔ To support our memorization task, the teacher asked us **to 'look for the facets' of each odor**.

This allowed us to enrich the 'general' odor of a vial with a variety of hues and shades[2] that helped differentiate each odor.

- ⇨ This search for hues and shades helped us to draw a kind of odorous neighborhood surrounding each odor and then,
- ⇨ to spread or extend this odorous space more widely between all the poles.

[2] I make use of the color vocabulary, but any suggestion is welcome, of course.

We also ran repeated recognition exercises until we could repeatedly recognize and situate as many vial odors as possible.

The **growing number of odors** made it increasingly difficult to memorize their numbers, and the teacher gave us a new vocabulary.

[CLIC]The Field of Odours© mapping➔ 2D general spatial projection of the seven olfactory families

Our odor kit was associated with a **2-dimensional projection of the odorous space** structured around the poles.

In this projection, two new intermediary zones appeared that laid between the poles, so the space was finally structured around 9 families.

The initial 7 poles:

- blue 'Terpenic',
- black 'Sulfured',
- green 'Hesperided' (citrus),
- purple 'Pyrogenic',
- grey 'Sweet',
- yellow 'Fat'
- and white 'Aminated'.

And there were two additional junction zones:

- the orange 'Fruity'
- and the brown 'Sylvan'.

As you can see, the 2-dimensional map included **45 odor adjectives -** minted, ambered, terpenic, alliaceous… - referring each to one of our **45 vials**.

The vocabulary he had invented was a mix of molecule names [sulphured, lactonated, aldehydic, citraled from the molecule of citral] and source names as per perfumers' habits [balsamic, ambered, honeyed, moldy…].

Note the choice of adjectives: it is interesting because it suggests the extension of the odorous space around the odor of its referent, whereas names (honey, vanilla, mold…) refer more to one or a collection of discrete entities.

- ⇨ In Jaubert's field of odors, each reference is, from the start, a structuring representative of its neighborhood.
- ⇨ Said in other words, each reference odor is a transition between neighboring odors

During the training, pupils first tried to **reconstruct the map from their own sensory experience**.

Of course, we made mistakes.

- ⇨ So, we had to restart the whole process of searching for hues and neighbors and relocate the mistaken odors.
- ⇨ But this time, we could seek help from the map to guide the "good" construction.

Nonetheless, it did not make the construction process straightforward.

- ⇨ If I take my case, I never managed to smell the continuity of the forest smells. This family remains somewhat arbitrary for me, but nevertheless learnable.

However, with time, this 2-dimensional map proved difficult to use because of false apparent proximities due to the projection.

[CLIC] retour

- ⇨ So, Jean-Noel Jaubert drew a **3-dimensional representation**.

[CLIC] Odor names ➔ 3D detailed structure of the olfactory families and shades

This new map is again interesting.

It still insists on the continuity of odor changes, yet with a **much clearer display**.

But, as you can see, the former odor adjectives have disappeared.

- ⇨ Jaubert finally got rid of perfumers' naming habits and kept only the molecule names: ethyl maltol, acetyl pyrazine…

- ⇨ Our teacher had an issue with odor names, and not without reason, as names do not only name…

At the beginning of our learning, the odors had no names and were designated by numbers.

Jaubert feared the connotations of the names: they could induce mistakes when locating new odors.

- ⇨ He had an **impressive example** with a molecule, the smell of which immediately recalled champignon.
  - So, pupils would often locate it within the sylvan dominant.
- ⇨ Yet, another examination of the odor would make appear as "fat".

He concluded that **names could be misleading**.

Nonetheless, and reversely, they could help transform perception.

Remember the introductory exercises when the teacher asked us to guess the source of odors.

To do so, we used the connotative capacity of words while searching for possible answers:

- is it lemon? Or orange? Or freshly cut grass? Or wet moss?

Words allow for drastic suggestive shifts. Still, such shifts may hinder the 'good' reconstruction process.

During the learning, the teacher invited us to 'search for the facets of the odors'. This meant using words to make odors elusive or changing…

- ⇨ … yet, in a much more controlled and limited way than during the introductory smell-guessing tests.
- ⇨ Uncertainty was framed by the few poles that structured the olfactory space and, later, by the few neighboring candidates provided by the map.

I personally found the **use of numbers** as names for the odors very helpful at first.

- ⇨ It helped ‘concentrate’ on each odor. What does this mean?
- ⇨ It avoided words’ suggestive disturbance and fostered the stabilization of the odor.

But, when the number of vials reached a dozen, memorization became too difficult.

- ⇨ So, names—even those as complicated as molecule names—were welcome.
- ⇨ Additionally, for non-chemists, chemical product names **hardly bear any odorous connotation**

[CLIC] retour

Transparent 8. 5/5. ‘Paying attention’

Experience destabilization plays a crucial role in the learning process.

To produce it, the teacher first generated ‘doubt’ with quite uncontrolled effects, and then asked us to ‘search for the facets of the odors’ within the suggested continuity of odor variations.

He could have also asked us to ‘pay attention’ to a definite odor.

- ⇨ This expression conveys the idea that in some way you are trying to dominate the excitation of your brain to make **reality appear with more contrast**.…

- ⇨ He never employed this common expression; he told me later he had no idea why.

But this study suggests a rather different interpretation of what is at stake when you ‘pay attention’.

- ⇨ It suggests that you are simply questioning, doubting, and destabilizing experience before reconstructing it.

By the way, another expression denotes a symmetric effect.

The expression “**the blue circle on the painting focuses my attention**” suggests that the blue circle acts on me to impose itself to my consciousness.

We can again propose another interpretation:

- ⇨ the expression refers to a situation where **one does not manage to un-stabilize and re-construct** experience **differently**[3].

We have finished with field case examination. How does all this provide some fuel for thought about perception?

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[3] Pierce makes it a capacity of things to generate their indexicality. Still, there is no need to resort to the subject/object division.

Transparent 9. Back to perception

Let's start with a first remark: this training **completely changed** my olfactory experience :

- ⇨ the world started to smell, constantly and everywhere, in a more or less sophisticated manner.

I lived in a much more odorous world than before the training.

1. ➔ **First, how can we account for this change?**
2. Then, in which measure can we extend our analysis to perception in general?
3. Finally, what does sensory knowledge consist in?

Transparent 10. 1/3 Accounting for the change

Learning

We just analyzed a transformation process in which we could identify three phases or steps.

In the first phase, perception was happening. It was an obvious and unquestioned experience, a perceptual "faith" according to Merleau-Ponty's wording.

Then, the confrontation of the two case studies of the **naïve panel** and the **expert nose training** suggested a sort of shift leading to a destabilization of this perceptual faith.

- ⇨ Through this shift, experience became uncertain, unknowable, 'shivering'…

In the third phase, learning transformed perception into a performance and normative achievement.

➔ After destabilizing perception, learning aimed to re-stabilize it; this included both the alleviation of uncertainty and a guide for its appropriate re-stabilization.

To account for the transformation during the learning process, I have used the notions of **destabilization** and **re-stabilization of experience**.

Why not make use of **more usual 'reality construction' processes**?

➔ **Acculturation and habitus** account quite well for 'slow', collectively-driven reality transformations and construction.

Social constructionist processes or **(Gibson, 1986[1979])'s ecological construction of reality** are other good candidates**. But…**

- ⇨ **Social constructionism and perception ecology** raise issues regarding the way the resulting reality relates to 'the' 'real' reality[4].

- ⇨ **Acculturation and habitus do not** fit the reflexive destabilization and re-stabilization work **at stake here.**

- ⇨ **The process at stake here is not only 'fast'**; it is also able to generate **a destabilization of cultural or social adaptations.**

➔ **It seems we lack appropriate concepts.**

[4] **There is an issue in Gibson's work regarding the way the ecological construction of the perceptual word finally matches the external world.**

Result of peculiar non-deterministic pedagogical techniques

The immediate mode of perception can be altered through the use **of particular techniques**.

Specifically, the re-adjusted practice is the result of:

- ⇨ the teacher's map
- ⇨ the controlled use of words
- ⇨ and my endeavors to reliably associate an odor and a particular location within the map.

Importantly, these techniques have **no deterministic effects**; people may resist doubt, and others will never achieve definite re-stabilization.

➔ I remember the case of a **wine lover** who had started learning about wine.

He had completely lost confidence in his own judgement. His perception of wine quality was totally uncertain, and he was keen to learn true quality from famous wine-makers of the area.

- ⇨ But, as accomplished aesthetes, they could not provide him with any rule regarding quality.
- ⇨ So, when I met him, he desperately waited for the truth to appear in his perception, which of course, **did not appear on its own**.

Then, re-stabilization can also be systematically fought against, as amateurs do.

- ⇨ To avoid the repetition and weariness that would quell or extinguish their passion, amateurs constantly destabilize their wine taste perception.
- ⇨ They thus live, as they say, "**in an endless world**", full of surprises and new tastes.

➔ So, an un-stabilized perception is not necessarily a limited transitory or abnormal state.

If we now come back to my sensation of **living in a smell-intensified world…**

➔ What happened?

- ⇨ Did odors appear that did not exist before?
  - o No, the world did not change during my training.
- ⇨ Did the new names acquired by odors make them more intense or present?
  - o Odors do not need a name to exist.
- ⇨ Had I become more 'perceptive'?
  - o I doubt my physiology changed after a 3-day training.

I would rather explain the change as the double result of

- ⇨ my new **questioning of odor experience**
- ⇨ and of the odor map, which supported and extended this questioning considerably.

The “body” interface and ‘being-in-the-world’

I just said that my physiology did not change. But maybe my ‘body’ changed.

Yet, what is this ‘body’?

➔ Bruno Latour commented on this in an article published in *Body and Society*.

He wrote:

> “[the body is] an interface that becomes more and more describable as it learns to be affected by more and more elements.” (Latour, 2004): 206

If the body is an interface, then it **is not** a **support** for perception understood as an interaction between the world and the mind **shaped** by a series of socio-cultural forces.

Latour made use of the notion of ‘interface’ to avoid the substantial understanding of body and perception:

- ⇨ the odor kit, the magnifying glass, as equipment, transform the way **one exists**.
- ⇨ In this understanding, to perceive or to have a body simply means ‘to exist’.

Yet the learning process is not just a matter of equipment inducing a change in **existence**.

- ⇨ In our case study, it involves a shift or departure from immediate experience.
- ⇨ This means a change in the modality of experience.

The **issue** with the notion of ‘interface’ is that it suggests an **articulation between two** different elements situated on each part of the interface: the self, subject… and the world.

It is not appropriate to account for immediate perception, which is antithetical to such a division.

The philosophical notion of ‘being-in-the-world’ does more aptly account for this non-mediating ‘interface’.

Transparent 11. 2/3. From smell to other feelings

I have focused on smell and taste throughout this presentation. Yet, **I felt no need to make a careful distinction between taste, flavor or smell**.

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Many authors underline the peculiarity of the 'chemical senses', taste and smell, compared with other senses.

- ⇨ They namely point out the impossibility of producing mental images of odors for instance.
- ⇨ I don't know where this statement comes from. Jaubert, our nose teacher **also said so**.
- ⇨ But he faced **strong criticism** from the students of the course.

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During the training, **we never spoke of bodies, sensitivities, or odors** as objective properties of substances[5].

The whole training dealt only with experience and its destabilization and re-stabilization.

The same training could have focused on vision, hearing, and touch just by changing the references.

➔ The learning did not make any difference between the senses… nor between mind and body.

Extending to other emotions?

So, the analysis could **extend to other perceptions,** such as emotions, all those feelings not tied to a definite sensory canal.

Such an extension would raise interesting questions, like:

- ⇨ how do you make such an emotion dubious and uncertain?

Regarding comfort, well-being, for instance there is plenty of ethnographical accounts that could be worth rereading.

Regarding anger, healthiness, dirtiness, or jealousy… there is a whole body of knowledge about witch doctors, shamans, psychotherapists…

- ⇨ I think of Tobbie Nathan's work namely (*L'influence qui guérit/The influence that cures)*.

[5] This was surely in part because, up to today, there is no convincing modelization of the working of the sense of smell like there is of the perception of colors.

Transparent 12. 3/3 Sensory knowledge

Our analysis led us to differentiate two sorts of knowledge:

- ⇨ **first, knowledge as arising from unquestioned obviousness and immediacy;**
- ⇨ second, as the result of the guided reconstruction of 'being-in-the-world'.

I say *guided* because our teacher did not let us reconstruct an odorant reality to our will.

- ⇨ **Our reconstruction had to be repeatable**. This means that the reconstructed reality had to be as invariable as possible.
  - Incidentally, this requirement made the construction quite different from non-expert ones.

- ⇨ Then, as with any language, the reconstruction had to be at least partially shared by all trained users.

The particular language conceived by Jaubert adds another features regarding the collective construction of odorous reality:

- ⇨ As a space and not a list, it **supports the inclusion of new odors**.

- ⇨ And the **very innovation of his odor language** is that it can extend and enrich itself by providing clues for the collective discussion of the location of a new odor.

Transparent 13. Conclusion

The title of this conference emphasizes the **pragmatic stance** adopted here.

It has mostly consisted of

- preventing the adoption of the classical understanding of perception as a representation of an already-there and 'external' world.

1. This led us first to **equate** perception with **existence** and correlatively with **reality construction**.

2. Second, the study of the learning process, invited us to contrast **two different modalities of experience**.

We started with perception as immediate experience, which is the realm of perceptual obviousness — or faith, as per Merleau-Ponty.

➔ Then, learning transformed perception into a **process,** an **activity**, or **something to perform**.

Such transformation was permitted by a shift in the modality of experience that, in our case, allowed for reconstruction and stabilization of perception.

Finally, I would like to open on another dimension of perception learning and reality construction, which deals with the kinds of realities that emerge.

In 1981, Bourdieu wrote a small article with Delsaut[6] to open a new research field.

- ⇨ It started by underlining that what we see or hear in a quattrocento painting or Bach composition is not what people saw or heard centuries ago.

- ⇨ The **article finally called for research** to account for the processes that produced the difference.

Since this pioneering work, a whole corpus of publications has aimed to interpret objectified differences in immediate perception by showing how they are socio-culturally constructed.

- ⇨ Today, we can count on a substantial amount of work that accounts for and discusses the habitus and acculturation processes that support reality construction.

However, other aspects of perceptual learning have not garnered the same attention and namely:

- ⇨ the **constraints** that reality-in-the-making must comply with to sustain existence.

[6] Bourdieu, P. and Delsaut, Yvette 1981. Pour une sociologie de la perception. *Actes de la Recherche en Sciences Sociales***,** 3-9.

➔ During the olfaction learning classes, smell reconstruction was tightly guided by the teacher.

- ⇨ Because he aimed to improve odor language and a more efficient olfactory communication, he requested that his pupils reconstruct a world of odors according to scientific reliability.

In this case, it mostly consisted in repeatability constraints.

- We had to repeatably associate each vial to its name and place on the map
- Those pupils likely to comply with these reliability constraints may become sensory experts,
- and their olfactory realities consist in a stabilized reality common to all same experts.

➔ But this is **not true** for any construction of reality.

1. A **perfumer** explaining perfumes to his clients would not have shared this aim.
    - He would try instead to multiply the images, uses, memories, significations, and symbols associated with definite odors to increase their capacity to generate interest or values.
2. An **amateur** would request perfumes (and himself) to be able to always renew their fragrance and never stabilize, like any major work of art.

There are different ways of reconstructing reality, which confer it with definite *modes of existence* as shown by Bruno Latour in his book "An Inquiry Into Modes of Existence: An Anthropology of the Moderns."

In this inventory, he lists a dozen veridiction modes that endow reality with particular modes of existence, such as the stubbornly continued existence of the scientific world or the inventiveness of fiction.

➔ In doing so, he has opened up a **vast field of research** concerning the perception and construction of reality, which grants us much work in the future.

Thank you for your attention. I fear this was quite a long and dense talk.

*****

Si question sur le double understanding of Body

> ***If the body is an interface**, then it **is not** a **support** for perception understood as an interaction between the world and the mind **shaped** by a series of socio-cultural forces.*
>
> *Latour made use of the notion of 'interface' to avoid the substantial understanding of body and perception:*
>
> - ⇨ *the odor kit, the magnifying glass, as equipment, transform the way **one exists**.*
> - ⇨ *In this understanding, to perceive or to have a body simply means 'to exist'.*

This statement tends to distinguish to different notions that are conflated in the word 'body':

- the body synonym of existence~~, or the 'body-subject' as per Alan Radley's 1995 article in Body & Society.~~
  - Merleau Ponty made a similar distinction between the body and the non-objectifiable 'own body'.
- and our particular enfleshment or incarnation, I avoid the word 'embodiment' on purpose,
  - we are bodied, not embodied
  - ➔ **Existence is not deposited in a body. And the body is not brought to existence by some miraculous action.**

[This is the way I understand Alan Radley in his article "the elusory body and social constructionist theory" published in Body & Society in 1995: "People have and yet are bodies": 4. To have and to be are usually quite antinomic verbs. So the "and" employed in the sentence needs some explanation.]

Production ou construction

I will adopt a pragmatist stance, which means a radically constructionist point of view.

I make use of 'construction' and 'reconstruction' to account for 'reality construction'.

But these words convey the unsatisfactory idea that realities are man-made pure ideas, or arrangements of already-there building blocks.

'Production' would be more suitable, because a production results from complex activities fed by a variety of interacting beings, material or not, collective or not, ideational or not…

Yet, reality production is always a re-production of reality.

Since the word re-production has also another totally undesirable meaning, I finally chose 'reconstruction'.

➔ Finally, this study opens on to a few questions.

One first set regards the reality reconstructed during learning.

Perception, the interface between being and the world, once drawn or produced, can be worked out but neither at will nor within the 'constraints' of any pre-existing world.

⇨ The **equipment** we use for this work crucially orients the result.
⇨ Still, not only the equipment is important.

There are different ways of learning to smell.

- You may learn through smell classes for noses,
- or through acculturation, habituation…
- You may belong to a group of perfume amateurs.

Each learning follows a particular set of constraints imposed on the emerging reality.

And both the constraints and the associated reality remain to be accounted for.

The second set of questions does not concern the construction process itself but the way it deals with experience modalities.

I have proposed elsewhere to call the non-immediate, uncertain modality of experience 'sensible experience', because of its capacity to change and be altered by words, suggestions…

Still, 'sensible experience' is another modality, but not necessarily THE alternative to immediate experience.

Here, again, deeper insights are welcome.

Appendix 1: Lenoir and the content of the vials

Lenoir was reluctant to make the content of his vials explicit, surely for intellectual property reasons. The vials are rarely, but sometimes, filled with a single molecule constitutive of the odorant product: for example, sulfite or vinegar.

But most of the odorant products of everyday life are mixes. In this case, some vials were filled with 'markers' of an odor, that is an odorant molecule common to all sorts of vanilla, cinnamon, pears, capsicum, etc.

- ⇨ This can sometimes lead to surprises for the user. When I led wine classes, participants frequently commented that the vial's odor was that of an "artificial" substance, such as raspberry or apple.

When such markers were unavailable, the vial proposed an odor representative of all pear odors. This means that any pear odor could be related in one way or another to this representative.

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