

# Fragebogen

## 1 Intro

### Welcome to this online survey!

Before starting with the questionnaire, please **read this introduction carefully!**

This survey is part of a joint project between [Marianna Obrist](#) of the Culture Lab at the Newcastle University, United Kingdom and [Alexandre Tuch](#) of the Computer Science Department at the University of Copenhagen, Denmark. We are interested in studying people's experiences of everyday life situations that involve smell (odor).

At the beginning of this survey we will ask you to recall and report a personal experience that involves smell. This experience will be the focus of the rest of the questionnaire. We will ask you questions about different aspects of this experience. These questions are organized in four parts:

- (1) the context in which your experience took place,
- (2) the characteristics of the smell itself,
- (3) evaluate your experience as a whole,
- (4) your thoughts on future "smell technologies"

In a final part we conclude with some questions on demographics and cultural background.

We expect that it will take about 20 minutes to complete the questionnaire.

Please note that this is an anonymous survey. Your answers will be analyzed and reported anonymously.

Finally, we would like to ask you to be focused and attentive during this survey. Your answers will be assessed at the end to determine the validity of your response. Only consistent and valid answers will result in a completion code.

Thank you very much in advance!

## 1.1 Mindset

### An exercise to start with



As you know this survey is about smell experiences. We would like you to start with an exercise.

Please think 1-2 minutes about particular moments of memorable smell experiences in your life.

Think about moments where smell played an important role, positive or negative (e.g., walking into a bakery, entering a hospital, tasting a spicy soup, trying out a new perfume, unpacking a new mobile phone, and so on)?

Try to mentally relive this moments when you perceive the smell. What did you feel, think, or do? Visualise the situation and the circumstances of this particular moment of a smell experience.

When you feel ready to proceed, please click on the "continue button".

## 2 Trigger

### An experience involving smell

Bring to your mind **one particular memorable moment of a personal smell experience**. The experience can be negative or positive.

Please try to describe this particular smell experience in as much detail as possible. You can use as many sentences as you like, so we can easily understand why this moment is a memorable experience involving smell for you.

## 2.1 Trigger2

### Title of your experience

If you have to give your experience a title, what would it be?  
Please write the imagined title for your experience in the text box below.

### How would you evaluate your experience in general?

In general, I think that **my experience was...**

(1) (2) (3) (4) (5)

not positive at all ☐ ☐ ☐ ☐ ☐ very positive

not positive at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	very positive
not negative at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	very negative
not personally relevant at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	very personally relevant

### 3 Context\_Social

## Part 1 Questions on the context within your experience took place

### Who was present when you had this experience?

- ☐ Nobody
- ☐ A partner / friend / family member
- ☐ Several friends / family members / acquaintances
- ☐ A stranger
- ☐ A group of strangers
- ☐ Others:

### 4 Context\_Place

### Where were you when you had this experience?

- ☐ In my own home
- ☐ In the home of friends or acquaintances
- ☐ At work
- ☐ In a public building or in a stranger's home
- ☐ In the street or another public space
- ☐ In a natural setting
- ☐ Some other place

### Please specify the location.

Some examples:

[In a public building or in a stranger's home] -> *Airport in New Delhi, India, in the arrival hall* or *New York city, shopping mall at the food court*

[In a natural setting] -> *On the top of the rocky mountains* or *At the beach in southern Italy, near to Bari*

[In the street or another public space] -> *In a commuter bus in San Francisco* or *At the Community Farmers' Market in Michigan*

### 5 Time

### How long ago did this experience occur?

Please specify the time unit with the "drop down list" and enter the time period in the text field.

The experience occurred 

Please select time unit

☐ day(s)  
☐ week(s)  
☐ month(s)  
☐ year(s)

 ago.

### 6 Odor\_PleIntFam

## Part 2 Questions on the characteristics of the smell itself

### How pleasant was the smell?

Try to remember how pleasant the smell involved in your experience was and rate it on the given scale.

	(1)	(2)	(3)	(4)	(5)		I do not remember
Not pleasant at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very pleasant	<input type="radio"/>

### How intense was the smell?

Try to remember how intense the smell involved in your experience was and rate it on the given scale.

	(1)	(2)	(3)	(4)	(5)		I do not remember
Not intense at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very intense	<input type="radio"/>

### How familiar was the smell?

Try to remember how familiar the smell involved in your experience was and rate it on the given scale.

	(1)	(2)	(3)	(4)	(5)		I do not remember
Not familiar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very familiar	<input type="radio"/>

## 7 Odor\_affect

### How would you describe the smell in your experience?

Which of the following terms **describe** the **characteristics of the smell** you experienced best? You can select as many as make sense to you.

- |  |  |   |   |
|--|--|---|---|
| <input type="checkbox"/> pleasant      | <input type="checkbox"/> sophisticated | <input type="checkbox"/> pure                 | <input type="checkbox"/> unpleasantly surprised |
| <input type="checkbox"/> attractive    | <input type="checkbox"/> subtle        | <input type="checkbox"/> invigorating         | <input type="checkbox"/> sickening              |
| <input type="checkbox"/> beneficial    | <input type="checkbox"/> voluptuous    | <input type="checkbox"/> healthy              | <input type="checkbox"/> dissatisfying          |
| <input type="checkbox"/> carnal        | <input type="checkbox"/> animal        | <input type="checkbox"/> tonic                | <input type="checkbox"/> imitated               |
| <input type="checkbox"/> delicate      | <input type="checkbox"/> unpleasant    | <input type="checkbox"/> mouthwatering        | <input type="checkbox"/> angry                  |
| <input type="checkbox"/> discrete      | <input type="checkbox"/> foul          | <input type="checkbox"/> childish             | <input type="checkbox"/> relaxed                |
| <input type="checkbox"/> distinguished | <input type="checkbox"/> heavy         | <input type="checkbox"/> sweet                | <input type="checkbox"/> soothed                |
| <input type="checkbox"/> soft          | <input type="checkbox"/> nauseous      | <input type="checkbox"/> well being           | <input type="checkbox"/> serene                 |
| <input type="checkbox"/> elegant       | <input type="checkbox"/> penetrating   | <input type="checkbox"/> pleasantly surprised | <input type="checkbox"/> reinsured              |
| <input type="checkbox"/> erotic        | <input type="checkbox"/> stinky        | <input type="checkbox"/> happiness            | <input type="checkbox"/> revitalized            |
| <input type="checkbox"/> feminine      | <input type="checkbox"/> dirty         | <input type="checkbox"/> attracted            | <input type="checkbox"/> refreshed              |
| <input type="checkbox"/> harmonious    | <input type="checkbox"/> persistent    | <input type="checkbox"/> feeling awe          | <input type="checkbox"/> stimulated             |
| <input type="checkbox"/> light         | <input type="checkbox"/> dynamic       | <input type="checkbox"/> desirable            | <input type="checkbox"/> energetic              |
| <input type="checkbox"/> refined       | <input type="checkbox"/> fresh         | <input type="checkbox"/> in love              | <input type="checkbox"/> shivering              |
| <input type="checkbox"/> reassuring    | <input type="checkbox"/> spring        | <input type="checkbox"/> sexy                 | <input type="checkbox"/> nostalgic              |
| <input type="checkbox"/> romantic      | <input type="checkbox"/> like          | <input type="checkbox"/> admirable            | <input type="checkbox"/> amusing                |
| <input type="checkbox"/> seducing      | <input type="checkbox"/> clean         | <input type="checkbox"/> excited              | <input type="checkbox"/> salivating             |
| <input type="checkbox"/> sensual       |  | <input type="checkbox"/> disgusting           |   |

Are there any other terms that describe the characteristics of the smell?

## 8 Overall\_affect

### Part 3

### Some questions on the experience as a whole

#### Feelings during the experience

Try to remember **how you felt during the experience**. Which of the following words describe best how you felt during the experience? Please tick the corresponding adjectives. You can select as many as make sense to you.

#### During this experience I felt...

- |  |   |                                       |  |
|--|---|---------------------------------------|--|
| <input type="checkbox"/> melancholic   | <input type="checkbox"/> distressed       | <input type="checkbox"/> at ease      | <input type="checkbox"/> delighted     |
| <input type="checkbox"/> angry         | <input type="checkbox"/> satisfied        | <input type="checkbox"/> dejected     | <input type="checkbox"/> convinced     |
| <input type="checkbox"/> serene        | <input type="checkbox"/> light-hearted    | <input type="checkbox"/> enthusiastic | <input type="checkbox"/> languid       |
| <input type="checkbox"/> impressed     | <input type="checkbox"/> aroused          | <input type="checkbox"/> excited      | <input type="checkbox"/> amused        |
| <input type="checkbox"/> sleepy        | <input type="checkbox"/> sad              | <input type="checkbox"/> despondent   | <input type="checkbox"/> serious       |
| <input type="checkbox"/> anxious       | <input type="checkbox"/> indignant        | <input type="checkbox"/> attentive    | <input type="checkbox"/> tense         |
| <input type="checkbox"/> interested    | <input type="checkbox"/> droopy           | <input type="checkbox"/> miserable    | <input type="checkbox"/> embarrassed   |
| <input type="checkbox"/> solemn        | <input type="checkbox"/> longing          | <input type="checkbox"/> passionate   | <input type="checkbox"/> hateful       |
| <input type="checkbox"/> contemptuous  | <input type="checkbox"/> uncomfortable    | <input type="checkbox"/> glad         | <input type="checkbox"/> content       |
| <input type="checkbox"/> reverent      | <input type="checkbox"/> gloomy           | <input type="checkbox"/> feel well    | <input type="checkbox"/> calm          |
| <input type="checkbox"/> pleased       | <input type="checkbox"/> ambitious        | <input type="checkbox"/> polite       | <input type="checkbox"/> frustrated    |
| <input type="checkbox"/> contemplative | <input type="checkbox"/> loathing         | <input type="checkbox"/> annoyed      | <input type="checkbox"/> determined    |
| <input type="checkbox"/> enraged       | <input type="checkbox"/> ashamed          | <input type="checkbox"/> alarmed      | <input type="checkbox"/> afraid        |
| <input type="checkbox"/> apathetic     | <input type="checkbox"/> distrustful      | <input type="checkbox"/> conceited    | <input type="checkbox"/> hopeful       |
| <input type="checkbox"/> lonely        | <input type="checkbox"/> empathic         | <input type="checkbox"/> joyous       | <input type="checkbox"/> peaceful      |
| <input type="checkbox"/> expectant     | <input type="checkbox"/> disappointed     | <input type="checkbox"/> depressed    | <input type="checkbox"/> conscientious |
| <input type="checkbox"/> elated        | <input type="checkbox"/> self-confident   | <input type="checkbox"/> bitter       | <input type="checkbox"/> insulted      |
| <input type="checkbox"/> worried       | <input type="checkbox"/> happy            | <input type="checkbox"/> insecure     | <input type="checkbox"/> disgusted     |
| <input type="checkbox"/> tired         | <input type="checkbox"/> feeling superior | <input type="checkbox"/> pensive      | <input type="checkbox"/> doubtful      |
| <input type="checkbox"/> courageous    | <input type="checkbox"/> impatient        | <input type="checkbox"/> startled     | <input type="checkbox"/> defiant       |
| <input type="checkbox"/> discontented  | <input type="checkbox"/> hesitant         | <input type="checkbox"/> friendly     | <input type="checkbox"/> jealous       |
| <input type="checkbox"/> astonished    | <input type="checkbox"/> lusting          | <input type="checkbox"/> hostile      | <input type="checkbox"/> confident     |
| <input type="checkbox"/> triumphant    | <input type="checkbox"/> desperate        | <input type="checkbox"/> wavering     | <input type="checkbox"/> bellicose     |
| <input type="checkbox"/> adventurous   | <input type="checkbox"/> feel guilt       | <input type="checkbox"/> bored        |  |
| <input type="checkbox"/> amorous       | <input type="checkbox"/> dissatisfied     | <input type="checkbox"/> taken aback  |  |
| <input type="checkbox"/> suspicious    | <input type="checkbox"/> relaxed          | <input type="checkbox"/> envious      |  |

Are there any other words that describe how you felt during the experience?



9 Overall\_attrakdiff

General characteristics of the experience as a whole

Please select from the following words those which would **describe your experience best**. You can select as many as make sense to you.

The experience was...

<input type="checkbox"/> isolating	<input type="checkbox"/> gaudy	<input type="checkbox"/> non-inclusive	<input type="checkbox"/> clear
<input type="checkbox"/> integrating	<input type="checkbox"/> classy	<input type="checkbox"/> inclusive	<input type="checkbox"/> unpresentable
<input type="checkbox"/> typical	<input type="checkbox"/> cautious	<input type="checkbox"/> lame	<input type="checkbox"/> presentable
<input type="checkbox"/> original	<input type="checkbox"/> courageous	<input type="checkbox"/> exciting	<input type="checkbox"/> commonplace
<input type="checkbox"/> technical	<input type="checkbox"/> impractical	<input type="checkbox"/> unpredictable	<input type="checkbox"/> new
<input type="checkbox"/> human	<input type="checkbox"/> practical	<input type="checkbox"/> predictable	<input type="checkbox"/> unruly
<input type="checkbox"/> amateurish	<input type="checkbox"/> cheap	<input type="checkbox"/> taking me distant from people	<input type="checkbox"/> manageable
<input type="checkbox"/> professional	<input type="checkbox"/> valuable	<input type="checkbox"/> bringing me closer to people	<input type="checkbox"/> ugly
<input type="checkbox"/> standard	<input type="checkbox"/> conservative	<input type="checkbox"/> easy	<input type="checkbox"/> beautiful
<input type="checkbox"/> creative	<input type="checkbox"/> innovative	<input type="checkbox"/> challenging	<input type="checkbox"/> bad
<input type="checkbox"/> complicated	<input type="checkbox"/> cumbersome	<input type="checkbox"/> confusing	<input type="checkbox"/> good
<input type="checkbox"/> simple	<input type="checkbox"/> direct		

10 Technology\_1

Part 4  
Questions on future smell technologies

Future technologies and smell

Currently, there are some first attempts and efforts to combine smell and technology. Such smell technologies aim to enhance everyday life experiences and the way we are interacting with technology/products.

Below you find six examples of such smell-enhanced technologies and visions for future technology to produce, capture, and identify all kinds of smells, tackling a wide variety of domains and interests.

Please read through the examples below and think of their differences and qualities.



(Photo by m4tik; symbolic picture)

Cinema technology

You take a seat. The lights go dark. Tony Stark struts across the screen. What's that smell? It's Eau de Iron Man! For Iron Man 3, smell-enhanced screenings started in Japan in April this year. Special effects in movies go beyond the stimulation of our eyes and ears and included also odor effects (Smell-O-Vision!). [\[link\]](#)



(Copyright by Jenny Tillotson)

Wearable technology

The Smart Second Skin Dress designed by Jennifer Tillotson interacts with its wearer's changing moods by releasing atomized bursts of fragrance in response to different emotional triggers. This scent dress is designed to promote relaxation, alleviate depression, boost self-esteem, or simply telegraph your amorous intensions. [\[link\]](#)



(Symbolic picture)

Ambient technology

The smelling screen invented by Haruka Matsukura at Tokyo University of Agriculture and Technology in Japan and colleagues, makes smells appear to come from the exact spot on any LCD screen that is displaying the image of a cup of coffee, for example. [\[link\]](#)



(Symbolic picture)

Mobile technology

Your mobile phone will get the sense of smell. Adamant Technologies, a small startup in San Francisco, is trying to give your phone or computer or other medical devices the ability to smell for themselves and for instance detect bad breath and other smells, which could be relevant for your health and wellbeing. [\[link\]](#)



(Photo by rromer; symbolic picture)

Photography technology

Olfoto is an olfactory photo-tagging and searching application developed by Steve Brewster and colleagues at the University of Glasgow in Scotland UK. The researchers envisaged that smell-enhanced interfaces allow people to interact with their very large digital photograph collections with thousands of images. [\[link\]](#)

## Internet technology









(Symbolic picture)

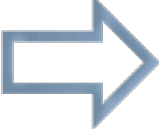
A technology that allows you to share smell sensations digitally with other people through the Internet. Such a technology may enable people to send and receive special smell experiences via the Internet. Personal experiences could be exchanged between each other – friends and family members spread around the world – in a more vivid way. [\[link\]](#)

## 11 Technology\_2

### Which smell technology do you like best?

Please order the five smell technologies by descending preference in the blue field to your right. You can do this by dragging and dropping the items with your mouse.

  
Ambient smell technology  
  
Mobile smell technology  
  
Wearable smell technology  
  
Cinema smell technology  
  
Internet smell technology  




## 12 Technology\_3

### Future smell technology and your smell experience

We have shown you some examples of smell technologies, but many more will come and allow you to capture, search, identify smells, share smells, or change smell in different situations.

Please try to imagine how future smell technologies could be combined in a desirable way with the experience you reported in the beginning of this survey. Think back to your experience, and consider any desirable difference such technology could make. Please share your immediate thoughts by answering the following questions.

#### How could your experience be enhanced?

#### What technology are you thinking about?

#### Why would such a combination of your experience and technology be desirable, or not?

#### Other application areas of smell technology

Is there anything else, you could think of, or any situations, where future smell technologies would be interesting to enhance your everyday life experiences?

## 13 Demographics

### Final part Questions on demographics & cultural background

#### How old are you?

I am  years old.

Please indicate your gender

- ☐ Female
- ☐ Male
- ☐ I prefer not to answer

How would you rate your sensibility for smell?

Please rate your sensibility for smell with the given scale.

	(1)	(2)	(3)	(4)	(5)		I do not know
Not sensible at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very sensible	<input type="radio"/>

14 Cultural Background

Please indicate your ethnicity?

- ☐ White (non-Hispanic/Latino)
- ☐ White (Hispanic/Latino)
- ☐ American Indian and Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Native Hawaiian and Other Pacific Islander
- ☐ Two or more races:
- ☐ Other:
- ☐ I prefer not to answer

In which country(ies) did you grow up?

You can indicate one or more countries.

1.

2.

3.

In which countries have you lived for a longer period of time (more than 6 months)?

If there were more than five, please name these, which influenced you most.

1.

2.

3.

4.

5.

15 FollowUpAndConsent

Consent

All the information we collect from you will be stored so that your name is not associated with it (using an arbitrary participant number). All data will be handled confidentially and anonymously. For research purposes, we would like to make the collected data available to other researchers. This means that upon request we would share your anonymized data with academic researchers for non-profit research. To be able to do so, we need your consent.

If you are willing to make your data available to academic researchers (in an ensured anonymized form) for non-profit purposes then please tick the check box below.

- ☐ I hereby agree that my data will be made anonymously available to academic researchers for non-profit research.

16 Control

Verification questions

It is **important** for the verification of your responses and thus for the validity of the survey that you answer the following three questions correctly. Otherwise, we will not be able to give you a completion code.

**Please be aware that you only have two attempts to answer the questions correctly!** Please read the questions and the answer options carefully before submitting your answers.

What is the main focus of this survey?

-

your earliest childhood memory where taste played an important role

feelings associated with different kinds of different smells

smell and cultural background

a memorable experience where technology played an important role

a memorable experience involving smell

Which of the following kinds of questions did NOT occur in the survey?

-  
questions about the characteristics of a smell  
questions about future smell technologies  
questions about your cultural background  
questions about your favorite smells  
questions about your feelings during a specific experience

**Which of the following questions did occur in the survey?**

-  
How does your mobile phone smell?  
How old were you when the experience occurred?  
How did your experience affect your friends?  
Who was present when you had this experience?  
What is your favorite smell?

## 17.1 CompletionCode

### Completion Code & Final Comment

**Important!** Please enter the following completion code at the HIT page to submit your answers and ensure payment.

Your code: **617169**

Please copy this code or write it down.

**Do you have any other comments?**

If you have any comment regarding this survey, please tell us here.

## 17.2 ValidatedAnswer

### End of the survey

Thank you for participating! Any questions regarding the survey can be sent to Marianna Obrist or Alexandre Tuch.

**Important!** Please enter the completion code at the HIT page to submit your answers and ensure payment. The completion code was provided on the previous page if you have answered the verification questions correctly.

If you are interested in the results and further information on the study, please feel free to contact us:

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You can close this window now.

## 18 WrongAnswer

### Not all answers were correct!

We are sorry, but we are not able to provide you the completion code unless you answer all verification questions correctly.

Click the "continue" button to answer again the verification questions. Or click on the link below to quit the survey without getting a completion code.

[Quit without completion code](#)  
(no payment will be received)

## 19 EndWrongAnswer

### No completion code

You failed twice to answer the verification questions correctly. We are sorry, but we cannot provide you the completion code.

To quit this survey you can click on the link below.

If you were unable to answer all questions correctly -- even though you filled in the survey attentively -- please contact Alexandre Tuch ([shr297@diku.dk](mailto:shr297@diku.dk)) and provide your answers to the verification question.

