

## Window Stories

The significance of windows to Germans - a qualitative, anthropological investigation of the qualities of a window

Hauge, Bettina

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# WINDOW STORIES

## The significance of windows to Germans

- a qualitative, anthropological investigation of the qualities of a window



### Report by:

Bettina Hauge

MA (anthropology), PhD

DTU, MAN, Design & Innovation

Email: behau@dtu.dk

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## **Executive summary**

### **Why this project and with whom?**

This research project has investigated 17 households in Germany (cities and rural areas). The main aim was to learn about the significance of the window to these people: What they think of their windows, how, when and why they use them in their everyday life, if they have a favorite window and why, as well as the opposite. The report also includes a special focus on overheating and people's strategies against this. Knowing about what people appreciate in a window and their actual practices and the reasons for their behaviour may be useful in many different ways, for instance to inform public strategies for overheating or to communicate with people in a more user informed way.

The people participating in the study lived in different houses and had different backgrounds. They were involved in the project over a period of 3-4 months. The prolonged participation was facilitated through a variety of ethnographic tools that required their involvement, such as making a diary of their heating experiences during a random week in the summer of 2014, taking photos of windows and sending postcards with specific tasks.

### **What do people appreciate most in a window?**

The analysis uncovered the value attributes and general perceptions of what signifies 'the good window' to the German participants. The window appears as much more than a functional tool used only to provide a view to the world or air out the home. Participants stress that the window must first and foremost safeguard against the weather outside, but their actions and statements also clearly show that the window is imbued with social and bodily qualities. By studying German window practices 6 topics were found, all reflecting what the window 'does' for these people and, hence, what it signifies to them<sup>1</sup>:

1. Daylight and types of light
2. Following the sun and the seasons<sup>2</sup>
3. View onto the world and into the home resp
4. Staging the window: The sill, curtains, and decorations
5. Taking part in life: The role of the window in social life
6. Security & functionality

Naturally some overlapping occurs, but all topics were found among all informants.

When people talk about their windows and what the window means to them in their daily lives, a strong relationship between residents and the windows in their homes appear. The window gives people access to the world about them and the opportunity to stay in touch with the social life and the course of nature. By providing people with this access to the outside, the window enables people to bond with their environment. This is why we may talk about the 'social values of a window', something that at the same time provides a safe, physical border to the outside, and a threshold people can control. It provides both distance and proximity to the surroundings. A few quotes from the German participants illustrate these qualities:

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<sup>1</sup> Same topics were identified in a similar study made in 2013 in Denmark with 13 families (Hauge 2013).

<sup>2</sup> In topic 3 and 6 statements about the importance of being able to open the window to air out, but the topic of how people use the fresh air from outside has been investigated elsewhere (Hauge 2010, 2011).

„Licht und Luft als erstes. Sicherheit, Öffnung, Verbindung nach außen. Schutz habe ich schon gesagt? Schutz. Hell.“ (Ulrike R, Heidenheim)

„Ein Fenster gibt Licht, Luft und Ausblick. Lässt auch Anteil nehmen am Leben.“ (Susanne T, Hamburg)

„Außenwelt, der Himmel, Geräusche, Luft, Licht.“ (Uli D, Berlin)

The high status of the window in people's lives relates a lot to the influx of daylight. Daylight is in great demand by the interviewees because, as they express, it contributes with:

- life and energy, joy of life and inspiration, health and cleanliness (thereby reducing the risk of winter depression)
- a daily and seasonal rhythm by being able to follow processes in the immediate surroundings through the provision of daylight
- light to see by
- character to the form and colour of the room.

In the eyes of the common German in the study, the 'good window' has the following characteristics, prioritized as follows:

1. must be able to withstand the climate and keep cold and damp out and function trouble free
2. gives maximum daylight
3. must match the style of the house and the rooms
4. provides a view that is (preferably) beautiful or displays social activity and allows the resident to follow the course of the year and its seasons
5. must be placed correctly, according to the size of the house and the heights of the residents
6. must be openable (for ventilation and bodily sensation of fresh air) - and with various opening positions
7. must be easy to maintain
8. must function as a safe border to the world outside (the reason why the home owner wants control over the view in)
9. has a window sill
10. must not dominate the public room (must not have too large glass facades)

The above 10 characteristics show functional, bodily and social qualities of the window. One example that illustrates its social character is the use of the sill: Many referred to using the sill for placing objects the children had made, thus displaying an important part of the family life (children growing up).

### **The window's ambiguity**

Thoughts about the window are not always rosy. Informants are aware that the window may make them fragile; the possible entry way for a burglar; overheating the rooms due to too much solar radiation. Also, making good use of the window depends a lot on the context, as the following quotes show:

„Es wird schon geöffnet. Das hier wird tatsächlich auch zugemacht, weil die Frau Schweizer eine unglaublich laute Stimme hat. Die haben eine schwerhörige Katze. Du kannst dir das nicht vorstellen, wie dieses Vieh schreit und zwar vorzugsweise morgens zwischen fünf und sechs.“ (Christine Z, Waiblingen)

Issues about maintenance and the window glass as fragile material also appear:

„Ist schlecht isoliert, ist vielleicht auch ein bisschen runtergekommen. Bei so Holzfenstern kann ja schon mal der Lack, die Farbe absplintern. Hat nicht so einen guten Verschließ-mechanismus, leicht offenbar für Einbrecher. Im Prinzip immer das Gegenteil zu dem, was gut ist.“ (Iris P, Langenfeld)

„Genau, es sieht aus wie Kalkflecken, aber in der Tat ist das Säure, die sich ein bisschen ins Glas reingefressen hat. Man sieht es wirklich, wenn man es weiß, man macht die Tür auf und manchmal im Winter beschlägt auch dann die Scheibe von außen so ein bisschen und dann siehst du es halt. Oder beim Putzen sieht man es und denkt immer, das muss doch abgehen. Aber das ist halt in der Scheibe. Das ist ganz ärgerlich.“ (Silke K, Hamburg)

So the window contains an interesting duality: On the one hand, the window gives people the much-desired daylight and access to the external surroundings; on the other, making proper use of the window requires contextual knowledge on e.g. noise and where overheating occurs – both annoying precisely because residents cannot control them. The lack of control means that people create strategies for ventilation (to ventilate at the right time to avoid noise or polluted air) and for solar shading to reduce overheating problems. Furthermore, the window is associated with certain risks and maintenance issues. Still, the positive qualities of the window by far override the negative qualities.

### **The window as a threshold**

Another form of duality is seen in people's desire for a view *out* but not a view *in*:

„Negativ ist natürlich auch der Einblick in die Wohnung. Es ermöglicht Fremden in die Wohnung einzublicken. Es öffnet meine Wohnung für Fremde. Aber vom Negativen war es das eigentlich auch schon. Klar, es zieht natürlich auch Wärme an, aber Wärme ist ja auch im Sommer nicht unbedingt negativ. Kann ich mich ja gegen schützen.“ (Kathrin M, Köln)

The statement illustrates people's need to protect themselves against (a sense of) being watched. It stresses the importance of the window's function as a threshold. Overheating is something less concerning since measures against it may be taken, making people more in control here. Naturally measures against people looking into the home could be taken too, but the prospect of being watched by a potentially malicious person is by far more concerning than the heat coming from an innocent sun. Also, the sun provides people with the much desired daylight and people may be more willing to compromise with overheating, such as accepting a higher room temperature rather than drawing curtains that take away the daylight (and view), precisely because of their pleasure in daylight.

The border between outside and inside is a central issue for people, and also indicates their concern with large shards of glass. It is well-known that windows can be seen as the eyes of a house, and too big windows may in fact prompt the idea of being watched by outsiders. It goes both ways: Another study found that bypassers felt uncomfortable if they came too close to large glass facades in a house. This was based on a concern that residents, sitting behind the windows, might feel they were prying. Thus it is possible to say that large glass facades may challenge the border between house/window and the surroundings.

### **The window's relation to well-being at home**

The study shows that the window is important to the informants' experience of well-being in their own homes. The well-being people refer to is primarily linked to the window's importance to the body and senses – as described in themes 1. Daylight, and 2. Following the sun and seasons - as a provider of daylight and a view. This is why the

window also involves bodily qualities, like sensing the wind and weather, smells and sounds from the outside. Special practices associated with the window, illustrated e.g. by statements about the importance of the window for following the seasons, the pleasure of making small displays in the windowsill or using it as a play area, further demonstrate the status of the window in people's lives and that it even has an identity-creating aspect; 'show me your windowsill, and I'll tell who you are'.



Photo: Christine's window sill, occupied by active children

But the window is about much more than well-being, enjoying a view and practical use in the everyday life. The window has a direct bearing on the knowledge people acquire, for example about the course of the sun (and using this knowledge to reduce overheating), the importance of the seasons for growing plants in the windowsill, and for decorating the home. People do not decorate and furnish their homes purely in terms of getting maximum sunlight, but also to avoid being dazzled by glare or preventing the furniture or rugs from fading. This is why it can be said that the sun and daylight – and thereby the window – anchor people in the world they inhabit as active human beings engaged in constant interaction with their surroundings. So the window embraces a complex set of diverse meanings, with overriding positive connotations and a high status among the informants as a window onto the world.

### **Window stories**

From the conversations with the 17 German families about their windows it was clear that all used the window as a way of staying in touch with the world. But apart from the value of the window in providing residents with the pleasure of a view and daylight, the ability to follow the seasons and a means of airing out the home to ensure family health, it also seemed that people linked to their *past*: People were in general able to remember windows from their childhood or youth and some even attributed their present choice of windows and how they use them today to experiences of the past.

It is not surprising that we bring with us the practices we have learnt at home, such as how often to air out, etc., but it is striking that people, hardly aided at all, have strong and vivid memories of windows in their past. It clearly reflects that the window is far more than a functional element in the home; it plays a social and dynamic role in people's lives and helps anchor us not just in the present world, through our everyday-life practices

with the window and as the safe threshold between inside and outside, view out and view in, normal day and feast day, light and dark – but the window anchors us in *time* as well. The following 3 short stories illustrate how windows of the past are part of our memories in the present through their social character.

The 3 window stories are representative in the sense that all informants seem to have a 'window journey' through their lives and a memory of it, much like 'my first car' stories. Of course this is not only due to the window itself but rather the fact that the window is an integral part of the home – as it is claimed, 'there is no place like home' - and memories of home are, in general, strong. However, that people remember specific windows none the less shows the bond between residents and their windows and reflects the social character of the window, as identified in the analysis of what the window does for people. These topics will be described in depth in PART II.

Throughout the report all empirical statements will be in German, as direct quotes, and the rest of the text in English. Each part in the report will be separated by a photo page.



## WINDOW STORIES FROM THE FIELD

### Story 1: Window of the past ... Sweet memories of windows in childhood and youth

The following story is an example of the fact that most people are able to remember specific windows in their life course, even years ago in their childhood, precisely illustrating the social significance of the window.

Barbara is a 60-year old politician who remembers the significance of a particular window in her active political youth – as well as the joy from using the window as a door as a child:

“Wir haben zum Beispiel in der Studentenzzeit in einer Wohnung gewohnt, wo acht Parteien gewohnt haben und ganz oben war ein Trockenboden mit einem runden, kleinen Fenster. Da haben wir am 1. Mai immer die Trompete rausgehalten und haben aus dem kleinen Fenster raus trompetet und dann sind wir auf die 1. Mai Demo gegangen. Das ist zum Beispiel eine wichtige Erinnerung. Dann habe ich schöne Erinnerungen an verbleite Fenster, Bleiglasfenster. Ich habe selbst mal das als Hobby gehabt, da habe ich auch schöne Sachen gemacht. Bleiglasfenster, da werden so Groschbilder usw. draufgemalt und das wird dann verbleit, ein Bleirahmen rund herum. Ich hatte tolle Sachen. Das habe ich alles nicht mehr. Das kannst du halt dann vor solche Fenster zum Beispiel vorhängen. Das ist total schön. Also jetzt nicht mit Kirchenglasfenster, sondern sowas. In meiner Kindheit haben wir in einer Wohnung gewohnt in einem alten Haus und da konnte man, das war so vergittert, es war eine Haustür, eine Etagentür, die so verschiedene kleine Fenster hatte und das eine konnte man aufmachen. Das fand ich so schön, wenn man es ausmachen konnte und konnte was rausgeben, ohne die Tür aufzumachen. Das fand ich zum Beispiel toll.”



## Story 2: The oriental rug

Susanne is 44 years old and lives with her husband and son in Hamburg in a house from the 60s, designed by an architect. She works as a psychiatrist.



Photos: Front and back view of Susanne's house

Susanne addresses the fact that too much daylight has a negative impact on textiles inside the home, such as on furniture and oriental rugs. She has an Iranian family background and is the daughter of an oriental rug shop owner. She has since childhood known about this risk of daylight changing the colours of the rugs:

”Mein Vater hatte ja ein persisches Teppichgeschäft und deswegen haben wir so ein bisschen Teppiche, die aber kein Sonnenlicht abkriegen sollen. Deswegen hatte ich immer ein bisschen die Gardine zu, weil die sonst ausbleichen. Um Blicke von aussen irgendwie abzuhalten, das habe ich überhaupt nicht. Ich habe es eher gerne offen”



Susanne also explains that it is 'not that important to her' to safeguard her rugs. She likes to be able to look out into the garden and if she is too worried about discolouring, she just rearranges the rugs. Still, the story shows how knowledge regarding daylight may be passed on through generations.

### Story 3: My father was a glazier

Ulrike is a 46-year-old goldsmith, living in a house in Heidenheim. She has a special relationship with windows that originates from her father being a glazier:

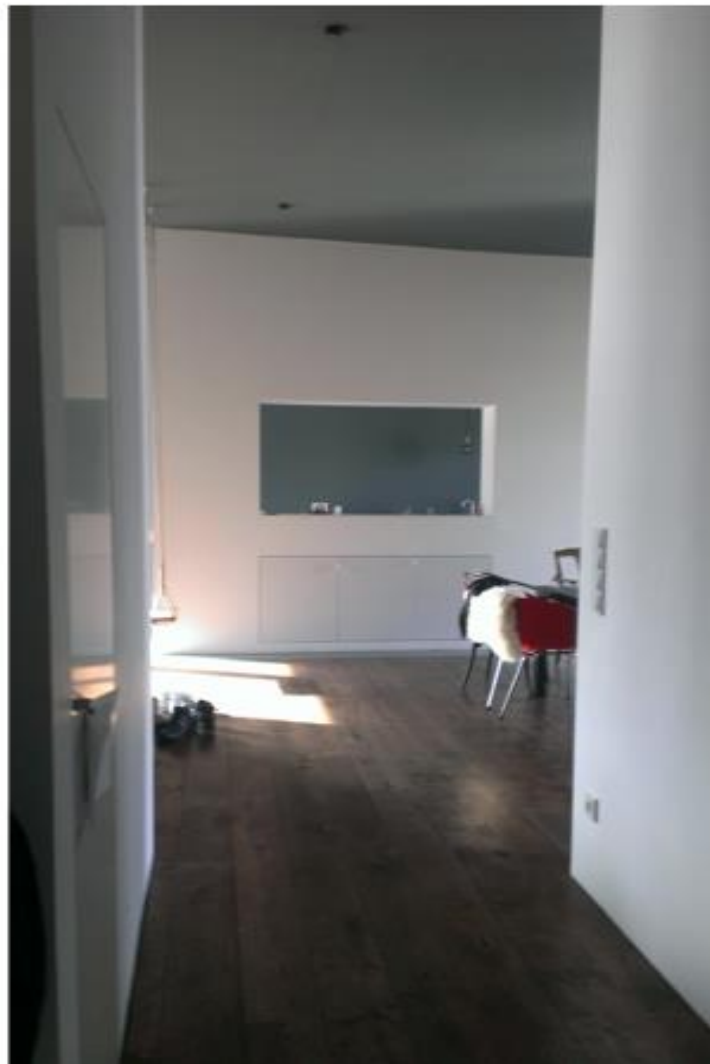
„Also Fenster haben einen ziemlich hohen Wert, dadurch dass mein Vater Glaser war. Und dass wir praktisch damit aufgewachsen sind und die Werkstatt ist ja ganz unten, damals unten im Keller, und wir hatten ständig mit Fenstern zu tun. Also das war auch so, wenn wir Taschengeldaufbesserung haben wollten, dann haben wir Fenster gestrichen bei meinem Vater. [...] Die Fenster hier hat mein Vater auch noch eingebaut und das war damals schon ziemlich progressiv. Also die sind jetzt auch ziemlich veraltet, aber sind auch Isolierglasfenster und wir haben alle gesagt, wir haben ihn überredet, wir haben gesagt, wir möchten Sprossenfenster haben, weil das schöner aussieht und dann hat er das praktisch so gemacht, dass die Sprossen innen sind wegen putzen.“



Ulrike also explains about the status that may be associated with the windows, not just the common status relating to amount - the more, the higher - but also the type of glass, gilded windows (the form of work known as ‚Verre Eglomise‘):

„Ich weiß, mein Vater hat dann irgendwie schon damals auch so goldbedampfte Fenster, das gibt es ja auch, das ist ja auch ein Sonnenschutz, wenn du die praktisch von außen goldbedampfst ... du spiegelst dich, wenn du von außen guckst und kannst nicht reingucken, innen kannst du rausgucken. Das hat eine Sonnenabwehrfunktion und das war damals schon ziemlich progressiv, dass der das gemacht hat, so eine Aussegnungshalle. In Heidenheim gibt es auch eine Bank, wo das ist, wo er das gemacht hat, und ich denke, bei der Bank ist es absolut ein Statussymbol oder eben schon auch sowas... hat ja auch eine gewisse Wirkung. Also die sind goldbedampft, das Metallene, man kann nicht reingucken, das ist schon was. Man geht vorbei und denkt: Wow. Ich würde es bei mir nicht wollen, aber da denke ich, dass es schon so bewusst gewählt worden ist, um was auszudrücken.“





## **PART I: Background**

### **Research questions**

How do ordinary Germans live with their windows? What does the window *do* for them? What do they use the window for, and when? What is the significance they attribute to the window, and what are the reasons for both the attributes as well as the actions of people?

Questions such as these were at the core of the qualitative investigation. Focus has been on the interaction between German people and their windows, what they think and feel about their windows, what they do with them in their everyday life, when and why, to identify the status of the window in their lives. The research has been performed with 17 families in Germany and their statements about their windows have been analyzed to identify the status of the window among the interviewed participants. Explanations on why the window has this status and place in the homes and hearts of these particular Germans will be given in part II.

### **From technology to sociality**

The aim with this project is to go behind the technical and functional qualities to investigate and describe the more social and bodily/sensory aspects relating to the window. Research shows that the window is used in many social situations and for different reasons that only to a certain extent are about functionality (Bollnow 1959, Cieraad 1999, Hauge 2012, 2015). This means that the window has further qualities than providing purely functional 'access to daylight' or 'ventilation options'. The window is expected to be important to people for many different reasons where functionality is one out of many. The findings from the field confirm this and may have the potential to expand the technical knowledge about the functionality of the window with new perspectives of the qualities of the window.

Analyzing the significance of a window in a holistic way means that, besides investigating functionality, the *social*, *cultural* and *bodily* importance of a window will be investigated. This may need some clarification:

The *social* significance of the window to people is to a large extent about how the window reflects something emotional in the everyday life. Here the window may be the means to an end - not about the window itself but rather about something social, like when used for airing out for the sake of the health and well-being of the family. How do issues of comfort or security (facade window vs skylight) interact with the use of windows? Do they have special memories about childhood windows? Other social values attributed to the window appear from the way people use it: Do they for instance use the window in strategic ways, as a status symbol, illustrating a good economy or a particular energy friendly lifestyle? Or is it a tool for people to follow the social life in the street or the course of nature?

A *cultural* significance of the window will be investigated by asking questions about the 'right window' and the 'right light' and other elements that may be connected to the "good window", such as curtains, sill, etc. as well as questions relating to aesthetics, such as the right types of window, a nice view vs having people look in, security issues, and the importance of the shape and style of the window. Is it possible to detect particular daylight attitudes in the northern parts with less sun than in the southern parts of Germany?

A *bodily* significance is about well-being gained through the window and the daylight and the sense of comfort from access to daylight, but also about the physical actions involved with the window, for instance if anything particular annoys people when they need to open or close their windows or in a particular window. Given the physical stature of people, the solar influx, views in/out, etc. is the window properly placed in the house?

Naturally the three perspectives, the social, cultural and bodily, are intertwined with functionality. The following model illustrates the mentioned parameters: "Social" and "cultural" are combined (heart), "bodily" is represented by the figure and "functionality" symbolised by the window, and may include low energy glass, opening options etc. Socio-cultural properties cover a.o. well-being/security, the appreciation of particular types of glass/windows, the 'good' window, etc. The bodily/sensory refers to how the window meets the bodily needs of the residents, how it allows (or not) for solar influx, etc.

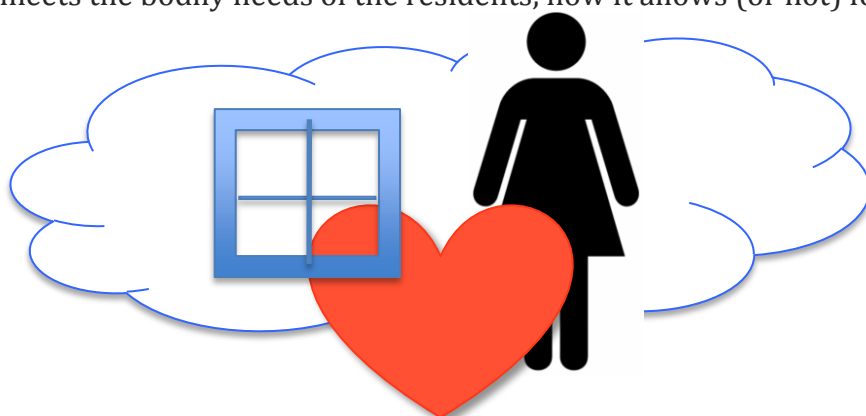


Fig. 1: Pictogram model illustrating properties of the window; the cloud = the context (the physical house, surroundings and everyday life); the heart = social/cultural; the figure = bodily; the window = functional

Doing research about "the place and status of a window in people's lives" may seem somewhat distant from what is really important to people. Generally speaking the busy lives people live, trying to make ends meet or being concerned about the well-being of children or the risk of becoming unemployed, overshadow more material things at home like a window. Is it possible for people then to reflect on matters relating to the window at all? The answer is yes, but it comes down to other issues than the window or the methods used. Although qualitative methods are useful for investigating all topics, people's interest in windows needs to be seen in light of the following:

1. The importance of the home
2. Ritualised use of artefacts at home

1: To understand the significance of a window we need to understand the home as something entirely different than a house or a building<sup>3</sup>. This may appear quite obvious, yet none the less has an impact on all items being part of the home, such as windows. Research shows that primary functions of a home relate to its capacity of serving as a relaxing sanctuary in the hectic everyday. 'Home is where the heart is', 'there is no place like home', 'home sweet home', are statements indicating home as a place of care and safety as opposed to the unsafe and uncontrollable world outside. In modern life people are not in control of very much, whether time or working life. This, however, does not

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<sup>3</sup> According to Flanders (2014) the transformation of houses into homes was an essential ingredient in the Industrial Revolution. Ordinary household objects changed status - from cutlery, chairs and curtains, to fitted kitchens, plumbing and windows, even the idea of what it takes to make a family.

apply to the home where people are (ideally) in control of what is going on. Home constitutes a place of belonging and caring and protecting the inhabitants is essential. To be able to provide this, a certain amount of control over the home and its artefacts is required. This is one of the reasons why people stress that a window must function and be openable, since this provides the pleasure of sensing the air from outside and also an exit way in case of danger/fire.

The 'place and status' of the window appears to relate to the contribution it gives to people's quality of life, anchored in considerations about health and care, thus of a social character. This contribution becomes clear from the conversations, because, generally speaking, the window is providing people with:

- *Airing options*, meaning (1) the possibility to change the experience of still and unpleasant air and the smells at home by ventilating and exchanging bad, sometimes taboo related, air (such as smells from bathroom or bedroom) with fresh air, (2) to regulate warmth (both inside as well as bodily) through the use of air from the outside, and (3) for pure enjoyment, just sensing the air. All in all: To safeguard a clean and healthy home for the family and using the windows for this reflect CARING for the family.
- *Access to daylight*<sup>4</sup>, meaning getting the *light and its warmth into the home* when available to make a pleasant indoor environment, and *access to the sky*, meaning the possibility to watch the sky and stars *at night* as well
- *A view onto the world* – and from this getting an idea of wind & weather useful for knowing how to dress, feeling a sense of freedom by looking out, having a flexible solar influx that may be more or less controlled through the use of curtains, the sill, etc. and the possibility of following the social life outside and the seasons and nature in general. All in all: Paying attention to one's environment and feeling alive by doing so.

2: The significance of windows is closely linked to our *practices* as a premise for our basic existence. Apart from our need to bond with people and to communicate, practices in our quite ordinary, mundane everyday make us bond with life in general. We participate in the practice not only through bodily activity but also with materials, such as windows, doors, PC, kitchen utensils, etc. Our practices make us perform in certain ways, for instance a routinized way of airing out. According to practice theories (Reckwitz 2002, Schatzki 1996, 2001, 2002, Shove 2012) it is precisely these ordinary actions that anchor us in the world, and not just a 'neutral' world, but one that requires a certain amount of routine and control for it to work. This is why the investigation analyses and describes 'the place and status of a window in people's lives' *through actions*: What are people doing with the window? – so as to identify what the window does for them. Practice theories indicate that we exist through our practices and what we do here constitute sociality. This is why our actions - also those that relate to a window - reflect sociality.

The window may be expected to show the above: Practices relating to the window will the significance of the home as a safe and controlled place for the family and may be routinized to some extent.

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<sup>4</sup> Professionals categorize daylight into 3 types: Sunlight, glare and reflected light. These distinctions are not known by 'ordinary' people, and do not appear in conversations. Participants use words like: Filtered light, indirect light, sharp light, dazzling light, and seasonal light.

## Design & methods

An explorative research design was chosen, and various ethnographic methods: Qualitative, in-depth interviews based on a semi-structured interview guide (appendix 1), participant observation regarding use of windows/guidetour, and 'cultural probes' sent to participants approximately 2 months before the interview took place. Consent to use photos for research and internal presentations at VELUX have been obtained from all. The interview guide was based on a similar study performed in Denmark in 2013, and developed in cooperation with VELUX and a German anthropologist. Interviews were taped and transcribed in extenso.

'Cultural probes' were used to involve participants over a longer period of time so as to get information on specific events where the interviewer would not be present. The 'cultural probe' was sent to participants as a small box that with various assignments, such as a diary/log book about heating experiences 'day circle' on residential activities at home, etc. It was received by participants before the main vacation period in the summer 2014 to make sure that diaries of heating periods could be registered and to create a sense of ownership for the research project. Informants were asked to send mobile photos of overheating experiences and of something important about their windows. There were 3 main assignments in the kit:

1. A description of the members of the household (to try and make sure that all residents have a say on the problem of overheating)
2. An exercise on well-being at home by placing various photos hierarchically and scoring/explaining them
3. An exercise where they should describe graphically heating/cooling and solar influx and if, how and where overheating appeared (with 'smileys' to reflect the level of annoyance)

Furthermore, postcard writing was part of the probe, aiming at getting a spontaneous feedback on an overheating situation, sent directly to VELUX, and a kind of log-book/diary (with predefined labels for showing weather and experience of heating) that (ideally) included mobile photos (real-time experiences). Allowing for participants' own stories – VoC (voice of customer) – is a well-known method in companies to connect with customers at key points in the 'customer journey'. When used as a part of a probe, however, storytelling becomes a way of learning people's experiences, needs and desires in their everyday life. Since the cultural probe was very time-consuming it was highly unlikely that all informants would perform the tasks, but a response rate of appr. 12 was estimated a success. 10/11 out of 17 families made the assignments, so the response was a little lower (65%).

The design of the probe was appreciated by all informants.

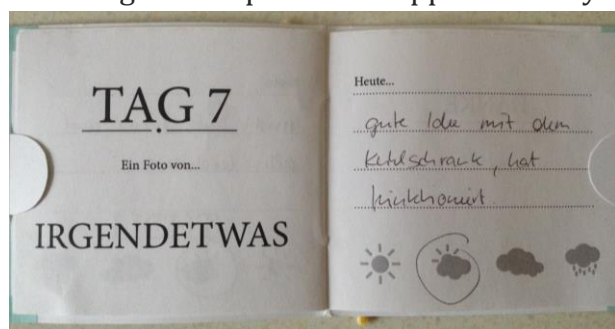


Photo of the week diary, where the informant states that the magnets placed on the booklet worked (for setting it on the fridge)



The ethnographic methods prompt a more free association than would have been obtained in a survey. The choice of methods was based on a wish to visualise sociality and bodily/sensory qualities relating to the window, as it appeared in the conversations with informants. The following photos show the probe and examples of how the result look like. Also examples of postcards are included, as illustrated below.

Examples of postcards:

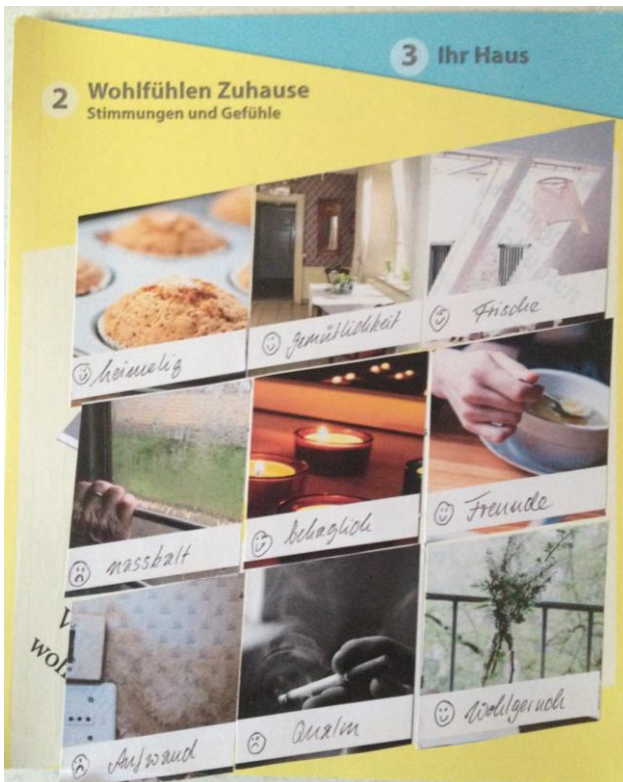
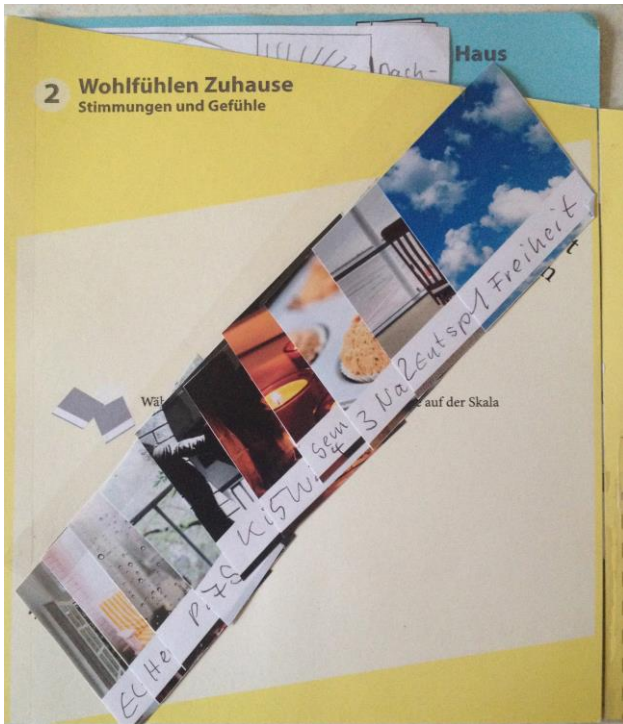


The cultural probe:  
Photos this page = the box as received  
informants, and its contents

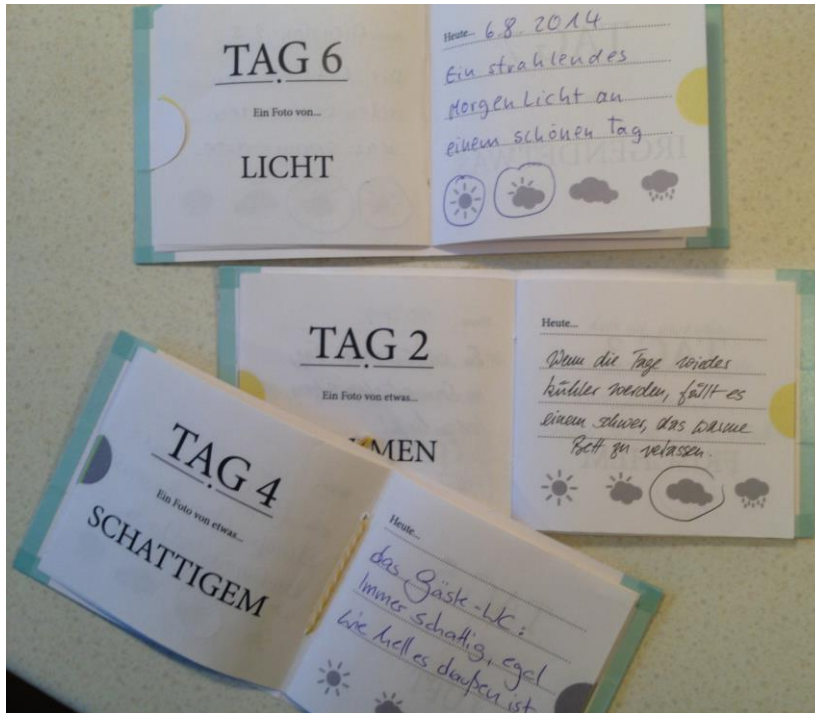
by



The cultural probe:  
Photos this page = examples of assignments done  
'Yellow background' assignment is about what constitutes well-being at home and the pictures people have placed indicate their priorities in what it takes to feel well at home.

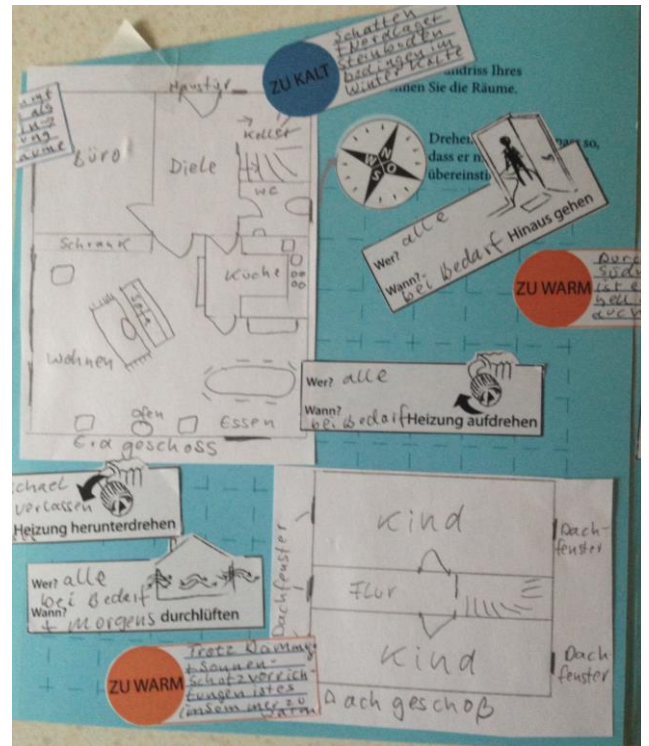
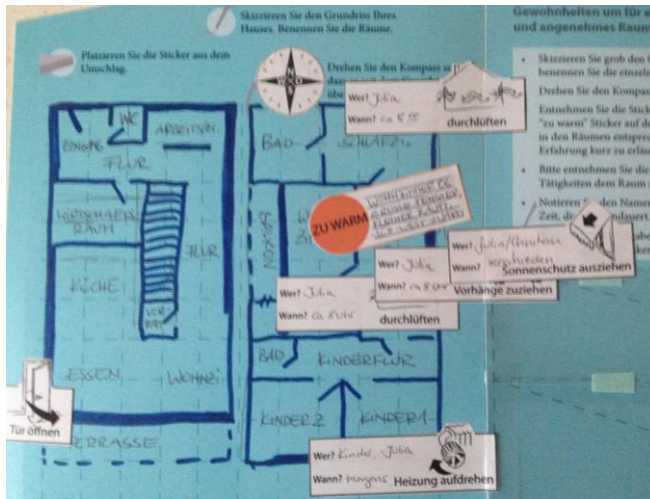


Example of 3 informants' diaries of different days (each day had a different task):



Examples of assignment 3, blue background:

Informants describing their homes and where overheating appears or the opposite, that it gets too cold.





## Participants in the study and selection criteria

Data collection was performed from mid July to mid October 2014. 17 families participated in the study. In some cases different family members were active in either the tasks of the cultural probes or the actual interview. Participants were 'ordinary people'; 11 families were found through the network of the German anthropologist performing the interviews, 6 families through an agency (requested by Velux to avoid any bias from being related). All were owners, either of a house or a top floor apartment. Interviews were made with young families and elderly people, women and men, families with and without children, and people with different educations, cultural backgrounds and life styles.

The qualitative interviews were performed from mid August til mid October 2014 during different times of the day according to convenience for those participating and to observe different types of use of the window. The project was managed by the author (Danish anthropologist), who also made the analysis and report, interviews were conducted by a German anthropologist, 1 interview by both, and meetings about the interviews, received photos etc. took place several times during the project. Data was coded in atlas.ti by using a predefined code list as well as an inductive approach on the material, creating more codes concurrently with the analysis.

Since more people live in West Germany, eastern parts were less visited; More than 7 mill live in villages with up to 2,000 inhabitants, 26 mill in cities with 2,000-100,000 inhabitants, and 1/3 of the population (about 26 mill people) in one of the 85 German 'Großstädte' (>100,000 inhabitants). It was the aim to have this reflected in the informant group. The following areas were visited:

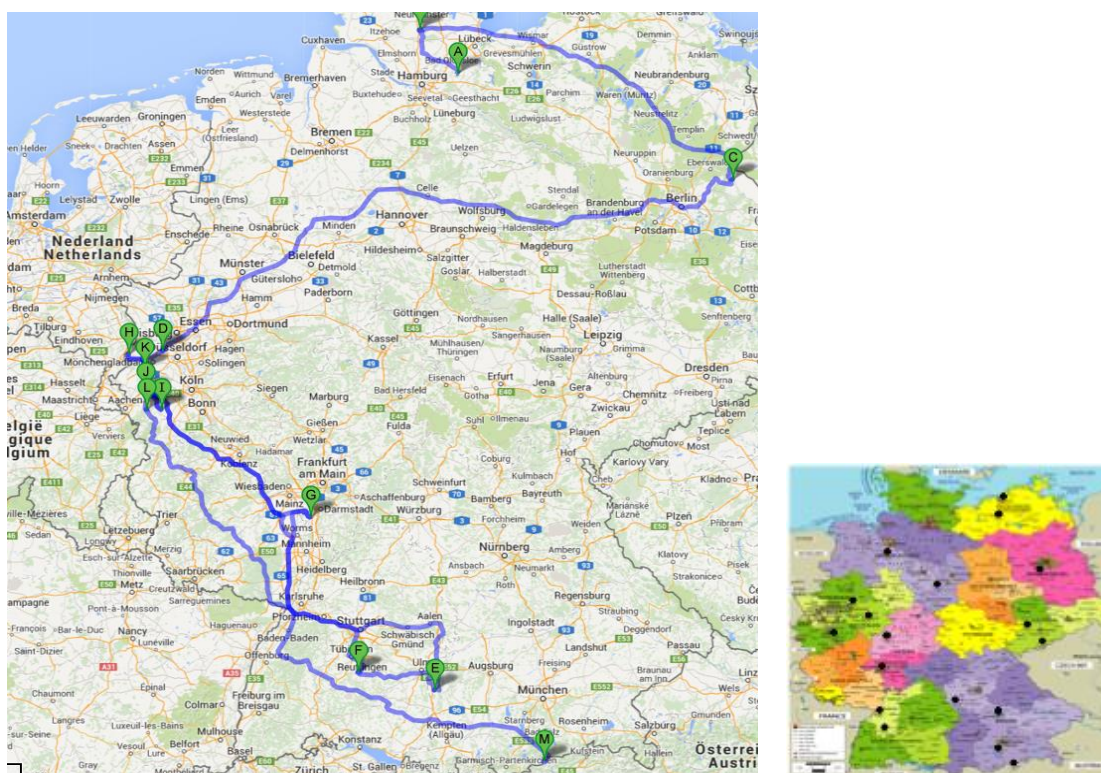


Fig. 2: Map of actual informants (left) - vs. first draft suggestion (right)

The northern, southern and western parts of Germany appear well covered, but the middle part is perhaps not. In general, however, issues about cold and warm weather seem to have been covered. Selection criteria were defined in cooperation with VELUX and have been met as described in the following table:

Selection criteria	Explanation	Achieved: Yes/No
<b>Age/ life phase/ background</b>	Different activities and window related practices at home will accompany different life phases The young family: 4-5; Families with teenagers: 8-9; Singles/elderly: 4-5	<b>Yes:</b> <i>Diversity in age and life phase was obtained, and 1 family of other ethnic origin</i>
<b>Owners of house/apartment + ratio house/apartment</b>	Those financially responsible for the house/apart. may be more attentive to windows 'Fair share' of each, but mostly houses	<b>Yes:</b> <i>All were owners, some had VELUX skylights 16 houses and 3 apartments were included</i>
<b>Amount of families</b>	Approximately 16-18	<b>Yes:</b> <i>17 families participate, and data saturation did appear</i>
<b>Apartment on top floor</b>	Top flat owners might have more considerations about daylight if few windows	<b>Yes:</b> <i>All apartments in the study were top floors</i>
<b>Gender</b>	Important to have both – due to potentially different practices	<b>Yes:</b> <i>Both genders participated (more women than men)</i>
<b>Housing with old windows/modern</b>	Important to get a mix since this is a true picture of German housing	<b>Yes:</b> <i>There was a huge diversity in types of housing</i>
<b>Urban/rural areas + Warm/cold regions</b>	A fair ratio representing the population settlement North and South Germany	<b>Yes/no:</b> <i>Both urban and rural areas and North+ South were covered. But mid Germany could have been included better</i>

Table 1: Selection criteria

## Validity

Saturation (as seen in a recurrence of topics) appeared with the 17 families. In general the selection criteria have been met, but perhaps a strict North/South perspective could have given more data on differences regarding overheating practices that those obtained. Findings from this particular part of the study may have an impact, although small, on those stated in this report. Still, the assignments in the probe were primarily intended at creating a prolonged involvement and for focusing on overheating. It is thus likely that the insights from the probes will only bring new knowledge to the field of overheating and well-being at home and not have an impact on the other topics found so far. It would have been nice to have more men involved, but in qualitative research there is never a guarantee that all criteria will be met 100%. More comparable buildings could perhaps have given more data about pros and cons of specific types of windows, but it was never the intention with this investigation to study the significance this way. People were conscious about different types of windows, even windows they had in their previous homes. This is why it is not entirely required to have e.g. low energy windows in order to comment on them. Naturally people cannot know for sure which practices such windows might involve, but they can none the less have an idea about what it would mean to their everyday life to get such windows. It could have been useful to bring different samples of glass for the interviews, but part of the interview was dedicated the cultural probes so there might not have been time. The experiment with the cultural probes was a success in

terms of facilitating the interview, prolonging the involvement and giving exciting, new data regarding overheating and well-being. The analysis will be quite time consuming, also because of problems with reading the handwritten comments. It was a little frustrating that no more than 10.5 probes were received, but cultural probes are time consuming and in this light the amount is very satisfactory. The informants received an amount of money for participating and perhaps we should have waited with paying till after the probes were received. Still, it is very motivating for the interview session that people will receive the money after the interview.

## Overview of informants

The following table shows family background and type of house/apartment, etc.

Residents	Age	Education / Work	City	House or Apart.	Roof windows	Inter-view	Cultural probe rcd.
<b>Young families</b>							
Georgius K.	59	Network Operator	München	House	N		
Iris P.	39	School Teacher	Langenfeld	House	Y (2)		
Juliane K.	44	Psychiatrist	Lüneburg	House	Y (1)		
Michael R.	39	Home Husband	Düsseldorf	House	Y (1)		
Susanne T.	44	Psychiatrist	Hamburg	House	Y (1)		
<b>Families with school age kids + onwards</b>							
Barbara C.	60	Politician	Dietzenbach	House	N		
Christine Z.	42	Social Worker	Waiblingen	Apart.	N		
Hiltrud D.	59	Housewife	Köln	House	Y (1)		
Ingo L.	51	Construction Engineering	Troisdorf	House	N		
Julia K.	44	Journalist	Hamburg	House	N		
Lutz B.	50	IT Specialist	Wuppertal	House	N		
Silke K.	37	Accountant	Hamburg	House	N		
Uli D.	45	Housewife	Berlin	Apart.	Y (1)		
<b>Couples/singles</b>							
Karin S.	59	Retired	Köln	House	Y (1)		
Karl & Christel (only part of probe rcd)	70	Retired	Wuppertal	House	Y (1)		
Kathrin M.	32	Lawyer	Köln	Apart.	Y (1)		
Ulrike R.	46	Goldsmith	Heidenheim	House	N		

Table 2: Survey of informants and their characteristics





*Ich bin lieber in Räumen, wo ich viel Licht habe, wo ich keine Lampen brauche. [...] das ist mir schon das Wichtigste, dass ich Räume habe, in denen Tageslicht reinfällt, in denen ich auch den Gang der Sonne sehen kann.*  
- Barbara



## **PART II: The German families and their windows**

### **Introduction**

This section describes chosen insights from research into the home and the significance of the home, as well as rituals in the daily life. The descriptions form the starting point for understanding practices related to windows, as they will be described in the analysis (part III).

When we investigate ‘what the window does for people’ (what it means to them), by analysing what they do with their windows, it may be useful to take a short look at the window’s historical significance in society, since our relationship to the windows in our homes naturally reflects the evolution of the window.

### **The window’s place in the home and in society**

The word ‘window’ refers to ‘wind eye’, originally being a ‘light opening’ in the home (with no glass). Both ‘light’ and ‘opening’ have positive connotations and may have resulted in various metaphors, e.g. the English sayings: “a window of opportunity” or “a window to the soul”, representing a threshold to something else, a barrier that seems to come with a special positive quality. By virtue of the daylight and the opening towards it, the window has been associated with something positive - and history shows that light has been used strategically in this way; there are examples of light being used as punishment - to deny people light is used as a torture method. Also few windows or the lack of daylight are seen in unhealthy housing in densely populated areas where the sun rarely appears; buildings with many or large windows have historically been seen as luxurious, since glass was highly expensive and therefore only for the few. Consequently, the window has been a symbol of social standing: the more windows, the wealthier the owner. So from the very beginning the window has had positive connotations, but has mostly been reserved certain (wealthy) citizens. In turn, this made access to daylight a scarce good for the few. This changed with the drop in the window manufacturing costs, and with houses becoming more common among the middle-classes windows became common property in any building, in particular after the 1950s.

Although the following is based on Danish data, it is likely to cover the German housing stock situation also<sup>5</sup>. The prevalence of windows followed the home development: with the single-family homes and high-rise construction of the 1960s, the majority of Danish families became owners of their own house or apartment<sup>6</sup> (Kraul & Søndergaard Madsen 2007) by co-building or building the home by themselves. Since a large part of the cost of

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<sup>5</sup> Germany has appr. 40 mill dwellings for over 82 mill people and its housing stock is characterized by being relatively young: 75% of all houses were built after 1949. Today very few new houses are being built (like in all Europe). There is a home-ownership ratio of 43% (54% in DK), and an average size of the household of 2.1 persons (in DK: 2.2). Contrary to all other EU countries, housing prizes in Germany have not risen sharply, save large cities (DBR 2008). Since 2010, prices have risen by an average of 7% per year in Germany's seven largest cities. Housing prices have increased in medium-sized towns and cities, too, although only by just over 5% per year. The equivalent figure for Germany as a whole is 3%. What we are seeing, then, are marked regional disparities with regard to price increases.

([https://www.bundesbank.de/Redaktion/EN/Reden/2015/2015\\_01\\_28\\_dombret.html#doc328614bodyText4](https://www.bundesbank.de/Redaktion/EN/Reden/2015/2015_01_28_dombret.html#doc328614bodyText4))

<sup>6</sup> Of course ownership is no guarantee for high quality. Many single-family houses built in the 60s and 70s are according to architect Stefan Valbæk too dark and closed off in their current form for light and air to get in. And according to Valbæk it is precisely light and air that is in demand by residents (Kraul & Søndergaard Madsen 2007).

building a house goes to windows (and doors), people have obviously got involved with the buying process relating to the windows, i.e. an interest in price and functionality has been present. Naturally such an interest may also be expected among home builders today: Julia, who lives in Hamburg, has designed and built a new house (with an architect) and she refers to making certain 'hard trade-offs' on windows, reducing the amount, precisely because of their prices. Still, in today's modern society and its new types of housing, such as the Ecohouse, the 0-house or low-energy house, and due to a generally speaking equal society in Germany, the window is a common part of the home and no longer for the few. In addition, increased knowledge of how daylight impacts well-being in a positive way has meant that both architects and owners – as stated by informants – consider daylight carefully.

The above brief description mainly serves the purpose of showing that all informants have experiences with windows, individual of course, since they have been living in different types of houses with different windows. Naturally, this means that what signifies the "good" window may be expected to differ between the informants, also due to the increased individualization in society in general, as well as the many window options today.

### **The window's core features**

Naturally, an investigation of the window must unfold its 'core features': Providing people with daylight, a view, and the possibility of airing out.

The importance of daylight to an individual varies from person to person, depending on the access to it in the region or due to specific bodily preferences/needs. In the Nordic region as well as in the North of Germany winters may seem long and dark; it can be expected that daylight will be especially cherished and have a more important place in the hearts of the Germans in the norther parts of the country. This means that the window could have a strong cultural importance here as opposed to in the south where people may need to shield themselves from too much daylight. However, a window with shutters or drawn curtains means that residents cannot observe the social life or weather outside. Other studies indicate that the option to observe nature and life outside are important qualities in a window (Hauge 2013, 2015). This is why it can be expected that people act in other ways to prevent too much the heat gain from solar radiation (as was also seen in the analysis). Peoples' relationships with their windows<sup>7</sup> may best be understood based on the idea that they feel a lack of daylight. No matter where people live (in the north or south), the importance of daylight was often described and measured by the informants as something they were short of. The lack of daylight was related to the season, or surrounding buildings or nature that might block the light from entering the home. In this sense, the window and its access to daylight can therefore still be seen as a scarce good and with positive connotations. The window is also the border between inside and outside and provides the mentioned opportunity to observe life on the outside, a window onto the world. That the window forms a border is essential and will be discussed in the analysis.

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<sup>7</sup> The experience of lacking daylight can be real: Winter depression (Seasonal Affective Disorder) is a result of a lack of light, and hence a low serotonin production, and occurs in appr. 5% of the population (of which 75% are women). <http://www.apoteket.dk/Sygdomsleksikon/SygdommeEgenproduktion/Vinterdepression.aspx>

The mentioned core features of daylight, that it is a *scarce good* and that the window conveys daylight and shows other aspects of the weather (e.g. frost markings on the window caused by cold weather), makes the window into a 'tool' for people. This 'tool' has social and bodily qualities and enables the individual to sense not just him/herself (since daylight is a sensation felt by our bodies) but also his/her surroundings (by making people knowledgeable about their environment). These qualities of the window provide the frame for performing both the interviews with the informants and the analysis.

### **Theories about the home: Correlation between the window and home**

It makes sense to take a look at anthropological theories about the importance of *the home*, when we need to understand the significance of the window. 2 theoretical perspectives of home may illustrate why the window is important to people:

#### Home as the cohesiveness in our hectic lives

In modern society home plays an important role in keeping together the family, providing meaning to an otherwise fragmented life. The home is a sanctuary, a sacred place, a 'rock' in the family's busy schedule. At home we 'celebrate' the family. In an increasingly time-pressured day we try - through force of habit and rituals - to keep the family together and healthy, and we try to convey and continue habits and rituals through the children. This continuation of habits is the desire to impart children with values and healthy habits (i.e. actions performed for the sake of care). Such habits and rituals are not only about traditions like decorating windows at Christmas time, but also appear in ordinary daily life actions and in remarks such as 'please air the room,' 'remember to close the window when you leave', etc.

#### Home as a social project

The home is the frame for the family: Any reconstruction and furnishing express a social project which is as much about building and maintaining *the family* and each member's role in it, as about adding value to and improving the house. The goal at home is to be able to dwell. 'Building' the home represents the purely functional renovation of the home, where the insertion of new windows is an example, and 'dwelling' covers home as a frame for sociality, where e.g. the decoration of the window at Christmas illustrates the desire to establish a sense of family well-being and continuation. 'Dwelling' constitutes the backdrop for the social roles and sense of belonging among family members and where you wish to create physical and mental well-being and comfort. In order to build and maintain sociality and well-being, one needs to establish and maintain it. It is precisely through repeated actions in an identical pattern that 'dwelling' is built. Regarding windows, 'dwelling' occurs when people try to use daylight strategically for the sake of the health of the family, or when the window is appreciated for being openable, something that allows for ventilation.

The 2 above perspectives can be found in the interviews and they thus provide the framework for the analysis, meaning that understanding the importance of the home will help to understand the importance of the window.

### **Ritualized actions at home**

To speak of the window as something 'ritualized' requires clarification. It is not a question of classic, institutionalized rituals that constitute framed and identifiable forms of social

action, often celebrating the community through specific actions. Rather we may talk of ritualization; if anything is celebrated here, it is the family and the everyday, and actions performed at home should substantiate and support this: At home the world must appear safe and controllable.

Ritualization covers the creative strategies, tactics and routines of everyday actions, where people with words, gestures, emotions, bodies, objects (such as the window) and cultural performances (like airing out) are not only trying to control and understand their relationship with the world, but may in fact try and change how the world appears to them. The attempt to change how the world appears to them is often seen in situations characterized by separation and transition, change or crisis.

Processes of ritualization is an inherent aspect of everyday life and are clearly visible in the practices we perform at home - cleaning, cooking, ventilating, how we read the news, how we argue and joke, etc. Central to all these actions is the process of transferring or projecting thoughts and feelings about objects or people. This is done because people are trying to understand and transform inner experiences of confusing, opposing or chaotic character. In modern society we have many different roles in many different areas where we constantly have to make a number of decisions and choices based on an almost infinite number of possibilities. This often involves an experience of confusion - that you are 'groping in the dark' in a sea of possible choices - and requires a transition. An example is the transition between work and free time, a transition that contains a change of roles and conflicting feelings/values. This transition can be dealt with through ritualization at home, e.g. in ventilation practices: People often air out when they come from work, whether or not a specific need to ventilate is actually present. This practice of airing the house when you come home from work is ritualized just to give people a kind of control over conflicting roles and different set of values, in this case when the person makes the transition from a working life that demands an efficient work identity to the role as a caring and patient parent or spouse at home (Hauge 2013, 2015).

Also the window and its associated actions - such as opening and closing it to ventilate the rooms, to sense the weather or listen to the surroundings, standing next to the window just to check out the weather and see what happens outside on the street, as well as decorating the window or the window sill - seem to be ritualized, involving a certain routine or a seasonal pattern. All informants are able to provide quite elaborate descriptions of their window routines, like Julie in the following:

„Im Winter ist es nachts immer, wenn wir schlafen, gekippt. Aber beim Einschlafen auch eher gekippt. Also da wache ich höchstens mal auf und denke: Boah, ist das kalt. Dann stehen wir auf und machen es zu. Dann gehen wir ins Bad und machen uns da fertig und duschen hintereinander. Mein Mann ist dann weg. Dann lüfte ich erst im Bad, weil da ja sehr viel Wasserdampf ist, dass das Größte raus ist, und dann öffne ich meistens nochmal die Schiebetür und für 5 bis 10 Minuten mache ich beide Fenster ganz weit auf, Bad und Schlafzimmer, damit es richtig durchlüftet. Denn unsere Kleiderschränke sind an der Nordwand, also man muss aufpassen, dass das nicht zu feucht wird. Schlafzimmer ist ja bekanntlich, kenne ich auch von anderen Wohnungen, schimmelfällig. Und Neubau dann auch noch zusätzlich. In der kalten Jahreszeit mach ich dann alles wieder zu und stelle die Heizung tagsüber an, damit das Schlafzimmer, das ja auch noch zur Nordseite liegt, das ist ja eine doofe Kombi Feuchtigkeit und kühle Außenwände, dann stelle ich meistens auf 3 die Heizung. Das

ist meine Fensterroutine.“

- Julie K, Hamburg

As illustrated by Julie, the very act/performance of the practice has become a routine, whereas elements in the practice naturally vary somewhat over the year. Below I will introduce a model to deconstruct everyday practices, one that will cover window practices too.

### **A practice model**

A practice can be deconstructed into: '*competences*' (which include what it takes to use the window, maintaining it, etc. of, for example, a remote control for a window), '*images*' (such as cultural performances and discourses on how the practice 'should' look/take place) and '*materials*' (elements necessary to carry out the practice, here of course the window, but also the option of opening it when you wish to ventilate). Looking at individual elements of the practice process will give a better idea of where there may be particular important or problematic areas. Next, some of the elements found in the analysis will be briefly repeated, to illustrate that it is the interaction between the three (C-I-M) that sums up what the window 'does for people':

**Competences** in window practices: These include, for example, being aware of the sun's travel through the rooms. Concrete actions connected with use of the window may be placing yourself strategically in relation to a window, placing tables and chairs according to how light travels in the room, opening and closing the window to get a sense of the weather; to sit comfortably in the chair so the view from the window can inspire and be enjoyed. To seek the daylight and feel its warmth as well as the wish to follow the seasons and the social life outside seems to be archetypal actions.

**Images** associated to the window: A window that has the curtains drawn, also during the day, can give the impression of serious illness or similar (something must be hidden) - while covering the window in the evenings are generally accepted. Special types of glass in the window may be associated with wealth or old age (gilded glass or hard wood frames). Large vertical windows may 'eat' the public space, while smaller windows can seem cosy. Also decorating the window is described as cosy.

**Materials** used in window-related practices: Naturally, the window and its components (energy glass, or similar) as well as the configuration options, remote control to the skylight; curtains; window sill; accessories for window maintenance etc.

In the final part of the report, section IV, it will be illustrated whether the discovered themes of the analysis, the model in fig. 1, as well as the 3 elements (C-I-M) regarding the use of the window are related.

### **Summary of Part II**

The window enjoys positive connotations and has since long been standard in every home. Both knowledge as well as people's personal experiences with how daylight impacts well-being has made daylight highly desired in the home and is especially coveted due to the general lack of it. Daylight is therefore treasured by the owners as well as architects when rebuilding or buying a home. The home's specific characteristics, e.g. the importance of creating a healthy and safe environment for the family, influence both the use of and the feelings towards the window. For example, a window makes it \_\_\_\_\_

possible to air out the home, thereby establishing the desired healthy and pleasant indoor climate. By understanding the importance of the home we may thus understand the importance (and status) of the window to people.

What the window 'does for people' is also assumed to translate into everyday actions associated with the window, appearing as a ritualization which involves more than the window itself (i.e. window sill, curtain, decorations, etc.). Window associated actions - such as opening and closing (to ventilate rooms or sense the weather), listening to the surroundings, standing by to the window to observe the weather or life outside, as well as decorating the window or window sill, or making sure that rooms will not get too overheated - seem to take place as certain routines and in seasonal patterns.

Seen as a practice, the window and window-related events build on the competencies, images and materials mentioned earlier in this chapter. These elements together determine what the window 'does for the people'.





## **PART III: The analysis**

### **Themes from the analysis**

In this section the special focus on the topic of overheating will be presented. First, however, a description of the 6 main themes found in the analysis of the qualitative data, all reflecting the significance of the window:

1. Daylight and types of light
2. Following the sun and the seasons
3. Seeing the world and being seen: View onto the world and into the home resp.
4. Staging the window: The sill, curtains, and decorations
5. Taking part of life: The role of the window in social life
6. Safety & functionality

Naturally some overlapping occurs, but all topics were found among all informants. Part of the overlapping seems a result of the health issues that relate to the home in general. Well-being at home, even people's emotional state, is linked to windows:

“Dieses Wohlfühl zu Hause kann durch Fenster auch beeinflusst werden. Ich finde das sehr entscheidend. Also einmal natürlich dieser ästhetische Bereich und dann eben mit Licht und Ausblicken spielen” (Susanne, Hamburg)

Christine explains about the importance of daylight and air for her mood:

“Ich meine, ich bin auch immer so ein bisschen stimmungsmäßig anfällig und damit hat das auch zu tun. Wenn ich nicht genug Licht und Luft habe, geht es mir schlecht, also körperlich und seelisch auch.” (Christine Z, Waiblingen)

Health issues will primarily appear in topic 3 and 5. Each of the 6 themes will be described, but first some remarks about the windows as the 'eyes' of the building:

„Ein Fenster ist Verbindung nach außen. Man sagt ja, die Fenster sind die Augen des Hauses. Fenster sagen schon was über den Bewohner aus.“ (Hiltrud K, Köln)

„Fenster sind immer so ein Aushängeschild.“ (Kathrin M, Köln)

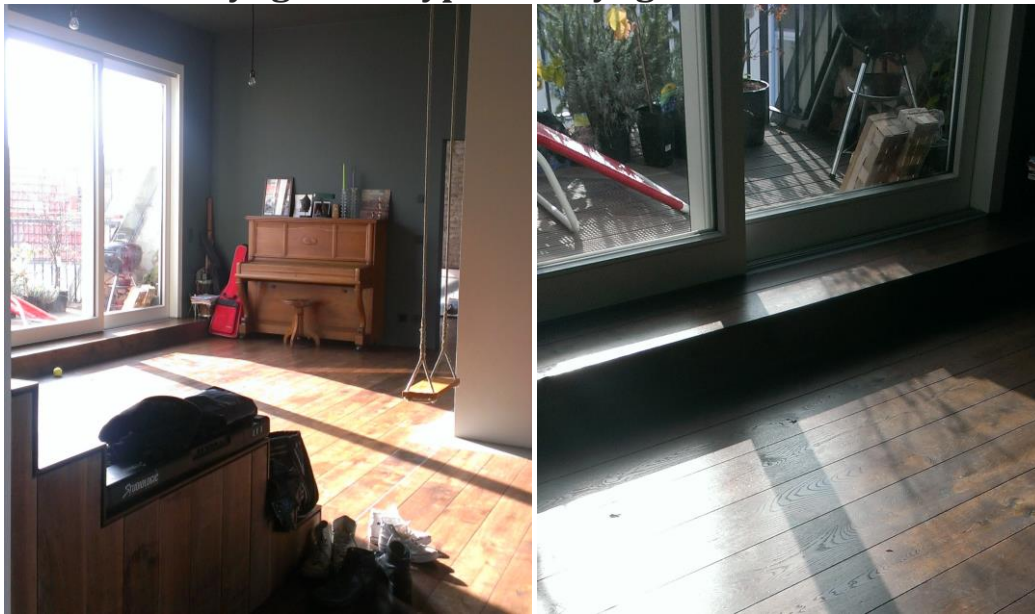
The quotes express that the 'eyes' of the house also inform about its residents, reflected in common statements about the window as the 'soul of the house'. The soul must match the house: Too big and dark windows are felt unpleasant, un-natural, out of proportion with the rest. For a house to be perceived as a home the house must have the right windows in the right proportions and, preferably, signal that this house is inhabited or someone is at home. Being a site of the social, the dynamic frame for the family life, make windows important for the overall expression of the house, making correct proportions an element of the 'good window'.

Naturally the importance of correct proportions of the window (and the building) is common knowledge among architects and has been known since the days of Vitruvius<sup>8</sup>. It appears that the importance of proportions may also be appreciated by ordinary people. Despite the fact that several of the informants mentioned the significance of the right proportions and correct placing it does not have its own topic. The reason is that the windows were already there when they bought the house. However, some have renovated their home and general comments about acquiring windows are included in Part IV.

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<sup>8</sup> More than 2000 years ago the Roman Vitruvius defined three main principles in architecture: 1. firmitas = solidity, 2. utilitas = usefulness, 3. venustas = beauty. Beauty appeared when a building followed the right, firm proportions (inspired by the human body).

## THEME 1: Daylight and types of daylight



Photos: Uli's livingroom

### Living daylight

Not just the window has functional qualities, daylight has as well. Some informants refer to daylight providing a more pleasant light to read by than when reading by artificial lightning:

“Bei künstlichem Licht, gerade bei diesen Lichterketten, diese neuen LED-Lampen finde ich ziemlich scheußlich.”

- Juliane K, Lüneburg

“Ich hasse Neonlicht und die ersten Serien dieser LED-Lampen fand ich auch schrecklich.”

- Hiltrud, Köln

Artificial lightning that comes close to the colour of natural daylight, the sunbeams, is preferred:

“Und hier im Flur zum Beispiel haben wir eine Lampe, die macht so gelbes Licht, dass das auch ein bisschen wärmer ist. Das finde ich auch total schön. Die haben wir auch schon ewig und haben wir immer gesagt, die müssen wir auch wieder aufhängen.”

- Juliane K, Lüneburg

Daylight is appreciated for its warmth, its colour, its brightness and enlightening the room; these qualities in turn give the room its special character, both in terms of the shape and the colours here. No daylight, no shadows – and it is the interaction between the seasonal daylight and the shadows that makes the rooms appear different in size, colour and shape. The status of the window is, as expected, directly related with providing people with access to daylight. Comments from the participants show that daylight provides residents with:

- life & energy, inspiration, a sense of cleanliness and health (reduced risk of SAD)
- a daily/seasonal rhythm that makes it possible to follow the dynamic environment
- light pleasant to read by
- character to the shape and colours of the room.

Daylight thus seems to be appreciated for its *mixture* of functional, social and bodily qualities. The following quotes will illustrate the value of the window in terms of the daylight it provides and its warmth. Barbara explains about the significance of daylight in her life:

“Also Fenster sind ganz wichtig für mich, weil Licht für mich ganz wichtig ist. Also ich glaube, ich könnte nicht irgendwo leben am Nordpol oder so, wo die Sonne nicht aufgeht und nur ein paar Stunden am Tag, sondern ich brauche das. Ich habe auch ganz selten die Fenster, also die Rollläden runter zum Beispiel. Also Licht ist einfach für mich ganz wichtig und deshalb sind Fenster natürlich für mich ganz wichtig, große Fenster.”

- Barbara, Dietzenbach

Christine explains that the warmth from the sun makes her feel well:

“Ich finde es wärmer und abends finde ich eine angenehme Tageszeit. ‘Du hast dein Tagewerk vollbracht und kannst ausruhen’ und wenn es dann noch schön hell ist und so ein warmes Licht, da fühle ich mich wohl.”

- Christine Z., Waiblingen

### Types of light

Many different types of daylight were given by the participants, such as indirect light, seasonal light, filtered light. Often they referred to daylight particularly appreciated for being distributed through something (a tree or through the clouds), ‘filtered’ or ‘indirect’ daylight and used strategically in the design of the house/rooms.

Georgius explains:

“Also am schönsten ist eigentlich das Frühlingslicht. Es muss aber auch nicht immer super klar sein, der Himmel. Also wenn es jetzt noch so teils bewölkt ist. Schön ist es, wenn die Wolken ein bestimmtes Schema machen, beziehungsweise hat man dieses Aufbauen rauf und runter. Das kann man sich natürlich sicherlich auch technisch irgendwie für den räumlichen Lichteinfall und so bestimmt vorstellen.”

- Georgius K, München

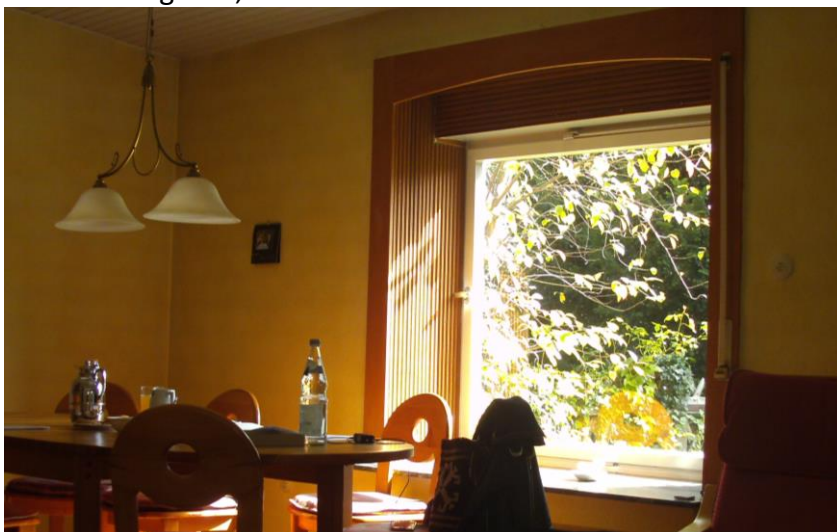


Photo: Room painted yellow for using the warmth of the daylight + Hiltrud's favourite window

Many talk of the pleasure of indirect light, as the following 3 quotes illustrate:

“Also ich finde Licht, was durch die Bäume fällt, schön, wenn sich das bewegt oder weil du dann auch so Schatten hast oder so. Sonnenlicht finde ich schön.”

- Juliane K, Lüneburg

“An bestimmten Stellen ist indirektes Licht ganz schön.”

- Hiltrud K, Köln

“Also nicht unbedingt direktes Licht. Wenn es jetzt wirklich zu warm ist und es kommt dann direkt die Sonne, strahlt ein, das will man dann oft vermeiden. Aber so wenn man auch im Garten sitzt oder wenn man jetzt im Wohnzimmer oder so wie wir jetzt da sitzen, ist es schon recht angenehm, da näher am Fenster zu sein. Man bekommt dann mehr das Gefühl, dass man fast draußen ist.”

- Georgius K, München

The favourite window may not necessarily be placed in the more public rooms of the home. Karl's favorite window is in fact the toilet window.



Photo: Karl's favourite window because of the light

Seasonal daylight appeared as highly valued, providing residents with an update on the dynamics in the outside environment. Some have a favorite season and even a favorite time of day when it comes to the daylight. Iris explains how she enjoys the dynamic light of the season and during the day:

“... vom Licht her (im Sommer) finde ich das schon sehr schön. Dann auch noch Herbst, wenn die Sonne etwas tiefer steht, das finde ich auch noch sehr schön. Dann die Abendsonne, klar, im Sommer finde ich auch toll. Schlimm finde ich halt im Winter, wenn es so trist ist, dass die Sonne gar nicht rauskommt. Das finde ich am allerschlimmsten, wenn man tagelang eigentlich gar nicht die Sonne sieht, sondern nur so ein Wolkenmeer. Was ich sehr schön finde, das hatte ich auch als Foto geschickt, die Morgensonne, wenn die in den Vorgarten scheint. Da habe ich so richtig das Gefühl, da beginnt der Tag direkt viel schöner.”

- Iris P, Langenfeld

The beauty of daylight may be especially appreciated for creating almost playful patterns, as the following 2 quotes illustrate and the photo too:

“Wenn wir im Frühjahr spazieren gehen und der Wald ist noch nicht dicht und das Licht

kommt dann und zeichnet auf den Boden Muster, das finde ich schön. Am schönsten fand ich als Kind, da hatten wir so einen Holzofen und der hatte unten in der Türe so kleine Fensterchen.”

- Karl & Christel G, Wuppertal



Photo: Living daylight patterns at Karl & Christel’s home

“Was ich auch gerne habe, ist der Flur, weil wenn morgens die Sonne aufgeht so gegen sechs im Sommer, dann scheint die erst den Flur runter und dann so langsam ins Wohnzimmer rein. Das finde ich immer schön.”

- Kathrin M, Köln

Rooms with much daylight seems to be preferred independent of age. Hiltrud explained that their 3 children had one favourite room they all wanted to claimed as their bedroom . The reason was that this room had 2 skylights. Hiltrud’s solution was to make them take turns - the room could only be theirs for a certain amount of time.



Photo: Hiltrud’s first floor bedroom worth fighting for

The above extracts from the interviews all show that daylight is a *dynamic phenomenon* appreciated for its diverse expressions and its contribution to well-being, the *living daylight* one might say.

## THEME 2: Following the sun and the seasons



Photo: Favorite window in Christine's family precisely because of the solar influx

"... Was ich sehr schön finde, ist die Morgensonne, wenn die in den Vorgarten scheint. Da habe ich so richtig das Gefühl, da beginnt der Tag direkt viel schöner."

- Iris P, Langefeld

The German informants often spoke of the pleasure of following the sun and the seasons.

"Was mir besonders gefällt ist schon das Westlicht, dass die Sonne hier reinscheint und das so ein bisschen im Wohnzimmer halt dann so halb breche, damit der Teppich geschützt ist. Aber ich mache nie ganz zu, weil ich muss einfach auch die Sonne sehen. Genau, das finde ich laht hier schön. Und hier in diesem Bereich, da habe ich mehr so dieses Gefühl der Jahreszeiten ... so ein bisschen dieses Innen- und Aussengefühl, also da kriege ich so mehr das Wetter mit und so." (Susanne)

The importance of getting the sun into the home is expressed by Barbara this way:

"Ich bin lieber in Räumen, wo ich viel Licht habe, wo ich keine Lampen brauche. [...] das ist mir schon das Wichtigste, dass ich Räume habe, in denen Tageslicht reinfällt, in denen ich auch den Gang der Sonne sehen kann.

- Barbara

Precisely to get the daylight into the home many buildings may be placed according to the movement of the sun, rooms too: The bedroom may face the chilled north-east, the kitchen east to allow for the morning sun, living rooms placed so as to facilitate the south-west sun in the afternoon and evening.

These architectural building principles may differ from region to region, one informant claiming that houses/apartments in Hamburg were better at allowing the light in than

those in Berlin. Whichever region people live in, they seem willing to move with the sun or to create areas of light to enjoy the sun when available.

Ingo explains how he tries to let in the sun:

“Ich versuche schon, dass ich Frühling, Sommer, Herbst die Sonne schon ins Haus reinlasse. Das ist mir schon wichtig, dass man nicht die Helligkeit ausgrenzt, sondern es sollte schon so sein, dass die - meines Erachtens - relativ großen Fensterfronten auch zur Sonnenseite hin ausgerichtet sind.”

- Ingo L, Troisdorf

Susanne and her husband have busy jobs and are much away from home, so they are especially attentive to those areas at home where the sun is available – to precisely use these spaces when at home:

“Ich finde es schon sehr schön frühstücken oder auch essen in einem Bereich zu haben, wo Sonne dann auch mal ist, oder wo so ein bisschen dieses Morgenlicht ist. Das finde ich schon sehr schön ... Wir sind ja wirklich auch viel nicht zu Hause und wenn man dann aber zu Hause ist und zusammen ein spätes Frühstück macht oder Mittagessen, dass das so ein bisschen im guten Licht sein kann. Das finde ich wichtig.” (Susanne, Hamburg)

Naturally, a house may be designed for the light to pass *through* the house, providing inhabitants with light throughout the day, making following the light less important:

“Das ist das Schöne, wenn man aus verschiedenen Himmelsrichtungen Licht hat ... selbst wenn man dann eine Ostküche hat, kommt dann abends auch das Licht darüber.” (Susanne)



Photo: Susanne's favourite areas are where daylight penetrates the rooms

Most people buy houses that are already built which obviously makes it difficult to change an already existing orientation or the design of the house to let in light through the rooms. But people are willing to compromise with comfort to stay in the sun:

“Na ja, wir haben ja diesen Durchgang zwischen Wohnzimmer und Esszimmer und wenn es irgendwie geht, versuche ich natürlich bei Tageslicht zu lesen und das heißt also, ich setze mich dann vormittags, wenn ich Zeit dazu habe, eher ins Wohnzimmer, obwohl das nicht so bequem ist am Tisch zu sitzen und erst nachmittags oder abends setze ich mich im Wohnzimmer aufs Sofa.” (Christine Z, Waiblingen)



Photo: Children's room (the brightest) with sunny play areas, Michael's home

Making good use of the daylight - such as in Michael's case giving the children the brightest room for playing purposes - involves following the sun to the extent possible, is important for the residents, as the rest of the quotes will now illustrate:

“Ich versuche halt auch so wenig Licht wie möglich anzumachen beziehungsweise das Tageslicht zu nutzen. Letztendlich kommt es nur bei diesen beiden Räumen zum Tragen, weil Bad ist Bad, da gehst du rein, ob morgens oder abends. In die Küche auch.” (Christine Z, Waiblingen)



Photo: Hiltrud's kitchen window where the sun makes her more awake in the morning



“Nachmittags hast du da Sonne. In Arbeitsräumen nach Osten, Küche und so, oder bei mir ist das ganz klassisch Schlafzimmer nach Osten ist einfach gut, Küche könnte auch nach Norden sein, aber hier ist sie nach Osten, was morgens natürlich toll ist, da wird man ein bisschen wacher und man hat den Blick auf die Straße und es ist immer schöner, wenn zur Straße Fenster sind, wo keine direkten Wohnräume sind. In der Küche arbeite ich am liebsten vormittags, morgens, weil es da schön hell ist. Am PC sitze ich am liebsten, wenn es regnet, weil es dann dunkel ist.”

- Hiltrud K, Köln

“Also da folge ich der Sonne. Das geht ja dann tatsächlich. Morgens hast du sie hinten auf der Terrasse zum Frühstück, mittags ist es dann entweder noch auf der Terrasse oder du kannst dich dann schon auf die Seite setzen, wo sie dann schön hinscheint. Abends hast du sie dann vorne schön. Also wenn es die Möglichkeit gibt, würde ich das machen. Hier gibt es nicht so viele Möglichkeiten. Rechts und links sind ja die Nachbarn. Da hat man nicht so viele Möglichkeiten, der zu folgen. Höchstens schon mal, dass ich gesagt habe, dass ich morgens in der Küche allein für mich frühstücke, weil die Sonne reinscheint, dann finde ich das schöner als hier. Das habe ich schon mal gemacht.”

- Iris P, Langenfeld

“Die Sonne haben wir morgens, das ist manchmal schön, wenn wir aufstehen und machen den Rollladen auf, dann haben wir die Sonne. Dann ist das so: Hurra, wir leben noch. Oder man macht auf und es ist grau und regnet. Dann ist das eigentlich kein schöner Tag. Aber im Schlafzimmer halten wir uns weiter nicht auf. Der nächste Raum ist dann die Küche. Dann gehen wir meistens, wenn wir nichts zu tun haben, an den Computer, Spielchen machen und solche Sachen. Das ist ein Raum, der ist sehr hell. Da kann man es manchmal vor Licht kaum aushalten. Den restlichen Tag sind wir dann hier. Aber das ist eigentlich nicht dem Licht geschuldet, sondern dem Tagesablauf, in welchem Raum wir sind.”

- Karl & Christel G, Wuppertal

“Es war natürlich bei der Planung des Hauses schon so, da haben wir uns ein bisschen beraten, dass wir das Wohnzimmer nach Südwesten haben. Eigentlich am meisten Sonne hat man hier. Und hier hat man die Abendsonne.”

- Karl & Christel G, Wuppertal

“Was ich auch gerne habe, ist der Flur, weil wenn morgens die Sonne aufgeht so gegen sechs im Sommer, dann scheint die erst den Flur runter und dann so langsam ins Wohnzimmer rein. Das finde ich immer schön.”

- Kathrin M, Köln

“Das Schöne an der Wohnung ist, dass dieser Bereich, wo wir jetzt auch sind, eigentlich zu drei Seiten Fenster hat und da scheint die Sonne morgens rein, das hier ist so mittags und da geht die Sonne unter.”

- Lutz B, Wuppertal

The many quotes above illustrate the significance of daylight in peoples' lives, which in turn precisely shows the importance of having windows at home and having them in the right places and proportions.

### **THEME 3: A view onto the world – and into the home**

All informants refer to the pleasure of being able to look outside, having a view – and most also about feeling uncomfortable about people looking into their own home. For instance, Hiltrud says:

“Ich sehe das permanent bei neuen Häusern, wo die Grundstücke klein sind, moderne Fenster gehen ganz bis unten, die Leute sitzen auf dem Präsentierteller. Man sieht das schon, wenn das Haus gebaut wird, man kommt da vorbei, da würde ich sagen, da kann ich mich nicht wohlfühlen in dem Haus. Die Leute werden angeglotzt, die sitzen da wie die Affen.”

- Hiltrud K, Köln

Still, the question about feeling uncomfortable seems to vary quite a lot, though, among informants. Family members may not always agree, as Iris and Juliane each describe:

“Ich würde das gerne so weit offen lassen, Robin will es immer wieder ein bisschen mehr zumachen, weil da die Nachbarn gucken könnten. Ja klar, können natürlich dann hier durchgucken, aber wenn ich dann eh was an habe, ist mir das auch egal. Wir machen es dann halt ein bisschen weiter zu, dass man nicht reingucken kann. Die könnten schon, wenn sie da oben im Fenster hängen und hier reingaffen. Aber wer macht das schon? Also das muss ich sagen, ist für mich nicht so ein Aspekt.”

- Iris P, Langenfeld

“Das ist immer die Diskussion zwischen Holger und mir, der immer gerne Vorhänge hat. Oder auch oben im Badezimmer, da war nichts und meine Tante war zu Besuch und die sagte: Man kann mich ja hier sehen. Ich so: Wer soll denn hier reingucken? Aber danach haben wir da auch Plissees angeschafft, die man hochmachen kann. Ich mache sie tendenziell immer runter und Holger macht sie tendenziell eher hoch.”

- Juliane K, Lüneburg



Photos: Karl's view from favourite window; Barbara's backyard

A view is both 'nice to have' but also 'need to'; residents wish to know about the weather outside, the life in the street, etc. Knowing the environment is required for matching the weather, for safely sending the children out to play, etc. Kathin explains that her favorite window also has the best view:

“Ausblick habe ich eigentlich von hier am besten. Viel Grün, ich sehe quasi, auf welchem Stand die Natur ist. Ab und an blühen auch meine Kästen. Ich kann den Rhein sehen, ich kann die Straße sehen, ich habe so von allem ein bisschen, schöne „Landschaft“. Ausblick finde ich ganz schön.”

- Kathrin M, Köln



Photo: Uli's large deck terrasse with a view of Berlin

Almost feeling a bodily need to look out is something several informants refer to, whether at the sky, the garden or the street.

“Und den Himmel, ich muss immer den Himmel sehen. Ich wollte von meinem Bett aus den Himmel sehen. Das sind Luxusbedürfnisse, das weiß ich. Aber dafür bin ich, was Kleidung angeht oder so, da bin ich dann nicht so. Ich kaufe meine Sachen auf dem Flohmarkt, dafür will ich aber aus dem Schlafzimmer in den Himmel gucken.”

- Hiltrud K, Köln



Photo: Hiltrud's bedroom

The almost bodily need to be able to have a good, clear view and to avoid a sense of being barricaded against the outside world are the reasons why some seem to dislike small windows and drawn curtains. This need almost corresponds with the pleasure of looking into other peoples' homes. With a big smile Susanne describes the view into peoples' homes as 'herrlich':

"Ich muss irgendwie so rausgucken können. Also dieses Verrammelte, das kenne ich so aus dem Ruhrgebiet, meine Mutter macht das auch, man is sozusagen richtig verrammelt. Und ich finde das hier in Hamburg so schön, also zb Isestrasse, wenn man da mit U-Bahn herfährt, dass man da in die ganzen Wohnungen reingucken kann, dass is herrlich."

- Susanne T, Hamburg



Photo: Hiltrud's favourite view; right: Karin's favourite window and view

Some enjoy the idea of getting to know the inhabitants when passing other peoples' windows:

"Ich gucke immer total gerne, wenn man durch die Straßen fährt, mir Fenster an. Rein sowie auch an. Ich meine von mir zu behaupten, ich erkenne, wer dahinter wohnt, an dem Fenster und an den Gardinen, die an den Fenstern hängen. Insofern finde ich, Fenster sind immer so ein Aushängeschild." (Kathrin M, Köln)

On the other hand, windows may make residents vulnerable against people looking in. Kathrin explains it this way:

"Negativ ist, es ist natürlich auch der Einblick in die Wohnung. Es ermöglicht Fremden in die Wohnung einzublicken. Es öffnet meine Wohnung für Fremde. Aber vom Negativen war es das eigentlich auch schon. Klar, es zieht natürlich auch Wärme an, aber Wärme ist auch im Sommer nicht unbedingt negativ. Kann ich mich ja gegen schützen." (Kathrin M, Köln)

Others refer to the problem of houses being built too close, allowing insight into the homes.

"Problem haben Nachbarn, da werden jetzt ganz viele Häuser gegenüber gestellt. Da ist schon blöd. Hier am Ende der Straße wird neu gebaut und da ist ein ganz großes Karree, das dahinter kommt direkt hinter den Reihenhäusern."

- Iris P, Langenfeld



Photo: Georgius' livingroom with curtains to give a distance

But again, whether people perceive it a problem that others may look into the home is a very individual matter. Lutz says, followed by a comment by Christine:

“Mir ist das relativ egal. Jetzt muss man sagen, bezogen auf unsere Wohnung dadurch, weil da ist der Garten drum rum. Der ist eigentlich nicht einsehbar. Das einzige ist die Küche, wo dann wirklich Leute, die auch zu unseren Nachbarn wollen, dran vorbeilaufen. Da muss man sich ein bisschen drauf einstellen. Aber selbst da, wenn die Leute vorbeigehen und reingucken, ich finde das nicht schlimm.”

- Lutz B, Wuppertal

“Hier kann man reingucken. Wir haben auch Blick rüber und die sehen auch bei uns rein. Aber ich habe nicht so das Gefühl, dass ich das schlimm finde. Die sollen das ruhig sehen und sich ein Beispiel nehmen (lacht).”

- Christine Z, Waiblingen

The quotes above reflect that there is a subtle balance between what may be felt acceptable and what is felt as crossing peoples' borders for intimacy. None the less, being in control of who is in fact looking into one's home seems to be preferred, yet may only be possible for a brief period of time:

“Wobei das Fenster lässt ja nicht zu, dass man wirklich an die Haustür schaut. So richtig Kontrolle ist es dann doch nicht. Wenn man nicht den Augenblick abgepasst hat, wo jemand vorbeigeht, dann hat man es verpasst.”

- Lutz B, Wuppertal

The balance between being open onto the world and closed for the sake of privacy is described by Susanne like this:

“Ich finde das [drawn curtains] immer ganz beklemmend, das mag ich gar nicht. Selbst hier in unserem offenen, aber hier kann ja auch keiner so viel reingucken. Jetzt hat sich ein bisschen was verändert, wir machen diese Gardine, abends ziehe ich doch immer so halb zu, weil man sonst auf so eine sehr schwarze Front guckt durch die dunklen Fenster. Das ist mir dann auch zu dunkel, also weil wir jetzt hier keine Beleuchtung im Garten haben und früher gab es ja Straßenlaternen und dann war mehr Licht. Jetzt mache ich so ein bisschen halb zu, weil mir das sonst zu viel so ein schwarzer Ausschnitt ist.”

- Susanne T, Hamburg

## **THEME 4: Staging the window; the sill, curtains and decorations**

### **The windowsill - a gendered diorama about the dynamic life in the family**

The windowsill is first of all interesting because most informants refer to it as important, but there are many reasons for this. The importance of the windowsill is naturally seen in its qualities. The windowsill is an informal appendix to the window, with its own particular value and it

- represents an alternative storage area
- is functional in terms of strategic daylight access (plants that need being placed N/S/E/W)
- is an aesthetic display that shows the life of the family
- may be used as a play area
- allows for seasonal dioramas

That the windowsill has these qualities makes it part of the 'good window' to people. It is in the windowsill and its scenographic decor that aspects of one's identity may be shown and family symbols exhibited. Despite its often modest size most informants refer to the windowsill as something they appreciate. Some particularly remember windowsills that facilitated sitting in them:

"Das hatte so eine ganz breite Fensterbank und da konnte man so sitzen und runter auf die Straße gucken. Das fand ich auch total schön."

- Juliane K, Lüneburg



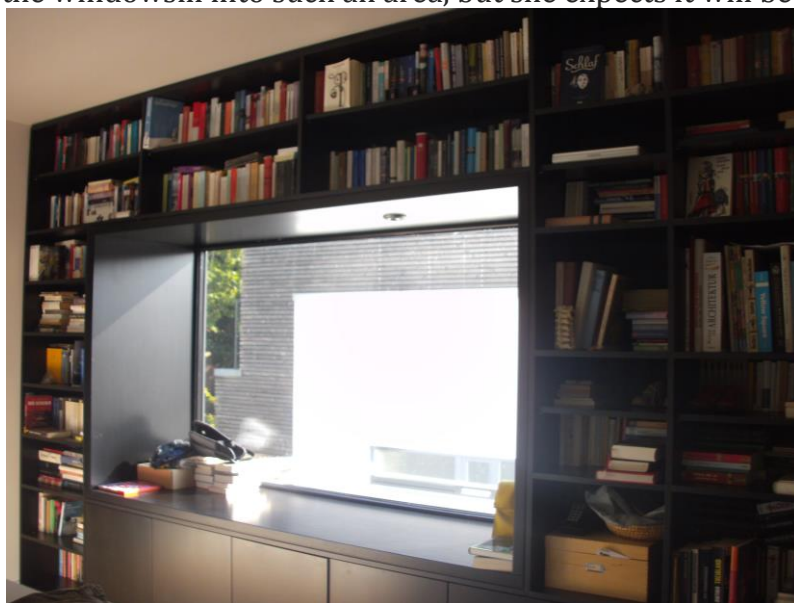
2 photos of classical windowsill with plants, 'stuff' and childrens artwork

The photos above are typical examples of ordinary windowsills; scenes with plants, candlesticks, artwork from the children. By placing particular objects in the windowsill, such as the school artwork of the children, these items contribute to a story about the inhabitants of the house, testifying that life in the family is lived actively and in progress. This way the windowsill tells stories about life at home – to the inhabitants as well as to guests and observers.

Bringing the windowsill into the 'life' of the family can be seen in the following photo, showing a teenage girl's comfortable couch placed in the deep windowsill.



In their newly built house the teenage daughter uses this place for making a cosy place. This way she may use the windowsill actively in the story about herself, expressing her present mood, since the decor of the windowsill represents a kind of self-care and well-being. Through the scenographic decor the windowsill becomes a tool as a statement about the individual or the family. Contrary to the daughter, her mother has not yet made the windowsill into such an area, but she expects it will be done at some point.



Photos: Above, teenager daughter's use of windowsill, below windowsill in mum's office

Although most informants refer to the windowsill as something they enjoy having, the windowsill is not always considered practical, nor do all make dioramas:

“Das mache ich nicht. Ich würde es zwar gerne machen, aber wir schaffen es meistens nicht. Eine Dekoration würde bei uns komplett untergehen, weil wir manchmal für viele Sachen nicht mal einen Schrank haben. Die liegen einfach sehr offen rum. Aber was ich zum Beispiel sehr schön finde, ist, im Esszimmerfenster auf der Fensterbank zu sitzen und runter zu gucken, wenn die Kinder draußen sind. Selma setzt sich da manchmal hin und malt, das finde ich auch ganz arg schön.”

- Christine Z, Waiblingen

As opposed to Danish windows that usually open outwards, many Germany windows open inwards and thus prohibit having anything placed here. The half-split window was mentioned as a 'good window' precisely because it allowed for a diorama below the area where it could open.



Photo: Half-split kitchen window in two different homes – both favorite windows

A final characteristic is that the windowsill appears gendered, an area of interest for women only, something an investigation of Dutch windows has found too: *"Window decoration, in combination with glimpses of the interior decoration, enables Dutch women to guess lifestyle and household composition. Decorating the window and judging the window decoration of others are essentially a woman's affair"* (Cieraad 1999: 31).

Other solutions are using the floor in stead, as Lutz mentions in the following quote:

"Erstmal, ich mag ja Fenster, die bis unten hingehen. Dann brauche ich keine Fensterbank, sondern dann habe ich den Boden, um davor was zu stellen. Wenn ich es ein halbhohes Fenster ist, müsste das auch nicht unbedingt eine Fensterbank haben."

- Lutz B, Wuppertal

Naturally, there is a risk of making gender stereotypes but the finding none the less matches investigations about interior decorating at home that tend to find this to be mostly to a feminine domain. Yet, the windowsill is not important to all (but to most):

"Ich habe nämlich nicht viele Fensterbänke und zu Dekorationszwecken ist das manchmal... Also das finde ich nicht wahnsinnig wichtig."

- Silke K, Hamburg

### **Curtains, sunblinds and the like**

Not all informants have curtains. Those who have use them against direct sun, to avoid people looking in, or the discoloring of furniture and oriental rugs. Susanne refers to the pleasure of finding the right curtains:

"Die haben wir selber angebracht. Da habe ich auch richtig Wert drauf gelegt, da bin ich richtig in so einen richtigen Dekoladen gegangen oder in Ottensen dieser Behrens Gardinen und Rollo-Laden. Dann haben wir richtig professionell Rollos gehabt und im Schlafzimmer auch noch eine Gardine zusammen und Hans hatte überall auch eine Gardine. Also da habe ich ein bisschen auch Gardinen entdeckt. Genau, Hans hatte eine Kinderzimmergardine, im Schlafzimmer eine Gardine und im Wohnzimmer wegen



Teppichen, weil ich habe ja so ein bisschen eine Vergangenheit mit Teppichen.”

- Susanne T, Hamburg

The following photos show various curtains/sunblinds, etc.:



Photos: Lack of windowsill substituted by small table – and a malfunctioning blinder in the guest room



A home where the proximity to neighbours is felt intrusive – this is why the curtains are there

It may in fact be difficult for people to decide what type of curtain or sunblind the family should acquire, but in general drawing the curtains is both a routinized practice, to get as much sleep as possible and for feeling safe at home, unobserved.

### **Decorations**

Decorating the windows is something most informants do at Christmas time or for other festive occasions where the windowsill or the windowglass is used. However, some decorations appear almost as a frame for the window itself – and some are all year round decorations, as illustrated in the photos below.



Photo: Ulrike's home



Photo: Décor at Uli's place

Decorating the window and the windowsill contribute to making the house into a home, creating the possibility of 'dwelling' at home. Since the decorations are often made for the feasts the window itself is turned into an element in celebrating the feast.

Iris describes the Christmas decorations in the following quote:

"Ja, was ich schon mal oben gemacht habe bei den Kinderzimmerfenster, zu Weihnachten habe ich denen Dekofiguren draufgeklebt, so Weihnachtsmänner und sowas. In der Küche habe ich es auch gemacht, auch ein paar Weihnachtssterne draufgeklebt. Ich finde Küche, wo man dann backt, das ist in der Weihnachtszeit auch noch ganz schön. Dann mache ich die Kinderzimmerfenster und halt die Küchenfenster. Hier habe ich einen Stern mal oben drangehangen mit einer Lampe, die du dann beleuchtest. Aber ich würde jetzt hier keine großen Sachen auf die Fenster kleben, also so eine Totalmama bin ich dann nicht, dass ich das im ganzen Haus haben muss." (Iris P, Langenfeld)



Photo left: Juliane's permanent decor

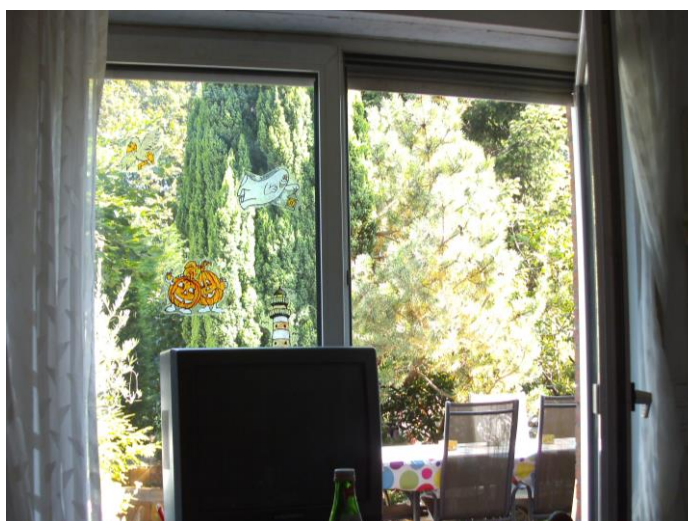


Photo right: Karin's dining room

Often the windowsill is part of the childrens' play, as the following photo illustrates.



Photo: Windowsill with childrens' toys, etc.

Furthermore, what people may place in the windows, such as what the children may have produced as artwork, may also prevent people from looking in:

“Im Kinderzimmer reißen sie auch schon mal, da waren sie halt gewesen, dann nimmt man sie natürlich nicht unbedingt ab, weil ich finde sie im Kinderzimmer auch als Sichtschutz ganz gut, vor allen Dingen wenn ich die da wickele und alles, muss da ja nicht jeder so reingucken.”

- Iris P, Langenfeld

## THEME 5: The role of the window in the social life

Socially the window seems to reflect the following important quality: It is a social border/treshold between inside and outside that facilitates both a proximity and distance to the world. As previously described, the contact that the window facilitates should be controlled, so residents need to feel that the window will work as expected because of a need for controlling the treshold towards the unsafe outside. The window facilitates a safe border towards the world, a way of shielding the family. Naturally the treshold may be crossed - at residents' own convenience. Keeping people at a safe distance, while at the same time showing interest, the window makes it possible to follow life in the street, like Christine explains in the following:

"Aber was ich zum Beispiel sehr schön finde, ist im Esszimmerfenster auf der Fensterbank zu sitzen und runter zu gucken, wenn die Kinder draußen sind. Selma setzt sich da manchmal hin und malt, das finde ich auch ganz arg schön."

- Christine Z, Waiblingen



Photo: Juliane's view to the playing grounds

Other informants also refer to sitting in the window, watching the social life in the street, which may be especially important if the residents themselves cannot participate. Karin explains how she as a child and very ill felt part of life by looking out the window:

"Oder man guckte, da gegenüber war so ein ganz kleiner Milchladen, dann beobachtete man morgens, wo die Milch, wo man noch so zapfte, angeliefert worden ist. Heute ist es eine Garage. Also da hing ich auch viel am Fenster, auch weil ich viel krank war, Angina, dann guckte man immer raus, damit man am Leben teil hat."

- Karin S, Köln

So the window makes it possible among other things to follow the social life outside, but the social life in the street may itself be influenced by the windows. Iris explains it this way:

“Ein Haus, wenn das ganz tolle Fensterfronten hat, wirkt ja direkt schon ganz anders. Es wirkt direkt nobler.”

- Iris P, Langenfeld

As the 'eyes' of the house or the 'soul' of the residents and for their aesthetic value, windows may play an important role in the general impression of an entire area. This is not necessarily a positive impression, since the appreciation of the aesthetics in an area is naturally individual – a matter of taste. One informant perceived her neighbour's house so uninteresting and unattractive in building style and windows that she always drew her curtains to avoid seeing it. This was a hard compromise, since she preferred being able to follow the social life outside.



Photo: Following the social life in the garden from Christine's favourite window

The window may, however, also take up too much of the public space, appearing intrusive on people passing. Or the house may make a special impression on bypassers precisely because of its windows. Many informants referred to the windows as something that could make the home unique, expressing a story about the uniqueness of the owners too.



The photo illustrates how residents have used windows/glass to try and create a special expression.

Photo: Hiltrud's hallway and staircase to cellar

As described above: A strong quality of the window is precisely the threshold and barrier towards the outside, which allows residents to remain private and still show an interest in

their environment. Lutz describes in the following quote how he appreciates to be able to say hello to neighbours and bypassers:

“(Leute) grüßen. Die meisten Leute kennt man ja auch. Das ist eigentlich auch ganz nett. Man sieht schon am Küchenfenster, wer geht da vorbei, ist das für einen selbst, dann geht man zur Tür, oder kann man sitzen bleiben, weil die bei den Nachbarn klingeln.”

- Lutz B, Wuppertal



Photo: Being able to see the guests (Silke); right: Being able to follow the social life outside

”Ich finde das an Hamburg eigentlich sehr schön, dass man abends durch die Straßen gehen kann und gerade früher in Winterhude, da geht man spazieren abends, um mal ein bisschen zu gucken, wie die so eingerichtet sind.”

- Silke K, Hamburg



Photo: Terraced housing in Hamburg, Silke's place

## THEME 6: Safety & functionality

### Safety issues



Photo: An open garden and view make potential burglars and window cleaners visible

Being able to 'trust your window' is essential. 'Trusting it' means that it should work as expected and provide the safe barrier to the outside world, but still enable contact with the outside and be practical to use and maintain. Barbara explains:

"Damit man in Kontakt ist. Vorne kann ich es gut öffnen, ich muss eben nichts wegräumen, um zum Beispiel die Post entgegenzunehmen, den Nachbarn Guten Tag zu sagen, vielleicht auch den Schlüssel rauszureichen oder so. Das ist mir wichtig. Und trotzdem ein sicheres Fenster zu haben, was, wenn ich es wieder zumache ... ich muss es nicht abschließen."

- Barbara C, Dietzenbach

Also, to some, there seems to be a sense of security in looking down on life outside. Christine describes it this way:

"Ja. Also für mich ist es eine Verbindung nach draußen, aber auch ein Schutz. Ich finde es schön, von oben nach unten zu gucken. Also wir wollten auch den oberen Teil haben. Ich kann dann so ein bisschen runtergucken. Das hört sich jetzt vielleicht arrogant an, aber das ist schon ein Gefühl von Sicherheit."

- Christine Z, Waiblingen



Photo: Christine's view from the balcony

Several mention the possibility of burglary. Iris describes how she and her husband differ in the way they close their windows and that she in fact agrees with her husband that closing them is the right thing to do:

“Ja, (wir machen zu) aus Sicherheitsgründen. Wenn ich jetzt nur schnell in die Kita gehe, dann lasse ich schon mal was auf Kipp. Aber selbst das soll man ja nicht. Die sind so schnell hier drin. Ich war da früher etwas legerer, aber Robin ist da sehr vorsichtig und er hat ja auch recht. Immer wenn wir schlafen gehen, wird alles zugemacht.”

- Iris P, Langenfeld

Juliane also mentions the differences in the window practices regarding closing them:

“Holger ist es wichtig, die Fenster zu schließen. Aus Sicherheitsgründen.”

- Juliane K, Lüneburg

That (at least some) windows must be fully openable - for getting out of the home in case of fire or flooding and for making a proper through breeze - is also commented by some residents. Karin and Lutz respectively in the following, where Karin also addresses the problem of finding the keys that open them:

“Zu Hause, der Sicherheitsaspekt bei nicht zu öffnenden Fenstern, okay, man kann sie abschließen, wenn man das meint mit... ist ja überall gegeben, hier unten ja auch. Ich weiß nur nicht, wo die Schlüssel sind.”

- Karin S, Köln



Photos: Uli's lockable window - and key ('but is it there when you need it?')

“Jetzt ist es bei dem Fenster nicht so kritisch, aber das ist so ein Einbruchsaspekt. Hier müsste ja jemand draufsteigen. Wobei das ist auch nicht unmöglich, das wäre schon leicht machbar. Also unter dem Aspekt und man weiß ja nie. Hier der Starkregen in Wuppertal, da hat man schon die dollsten Sachen erlebt, Sturm oder was weiß ich. Irgendwie ist das mehr so Fenster zu, wenn man das Haus verlässt.”

- Lutz B, Wuppertal

Making various safety arrangements could be seen in most houses. Hiltrud talks about this in the following and continues with describing that she is in general not worried about burglary:



“Der hatte auch eine Alarmanlage und eine Schließanlage, die mit der Polizei verbunden war. Also damals schon, das war eine Seltenheit. Der hatte die Kellerfenster von innen mit Metallplatten zugeschraubt. Hier sieht man noch, das kleine Ding da, das ist der Rest. Ich habe keine direkten negativen Erfahrungen mit Einbrechern gemacht. In dem Haus, wo wir früher gewohnt haben, aber das war so harmlos. Da hatten wir keine Gitter an den Kellerfenstern, weil die verrostet waren und ich mache das Kellerfenster auf zum Lüften, gehe rauf in meine Wohnung, zweiter Stock, das war so schön groß, nie was bei gedacht.”

- Hiltrud K, Köln

So, although the German participants may not be concerned about burglary in general, most refer to closing windows 'for safety reasons'. It may also be about keeping insects and animals out, as Susanne explains:

“Ich schliesse. Das ist dann das Problem mit den Mücken, finde ich, da bräuchte man wieder einen Mückenschutz. Das was auch für mich ein bisschen eine Umstellung, dieses über Naht dann das auch gekippt lassen. Man wird ja eigentlich so ein bisschen abgeraten, wenn man sozusagen so sehr ebenerdig wohnt, weil das auch eine Einbruchgefahr sein kann. Aber dadurch dass wir jetzt also nicht so ängstlich sind, machen wir das im Sommer nachts, dass wir das schon auf gekippt dann auch lassen. [...] Hier lüfte ich gerne abends (mit der Schiebetür) und da merke ich dann schon, dass ich es ein bisschen unheimlich finde ebenerdig, dass dann doch eine Maus oder eine Katze ... einen Fuchs haben wir schon mal im Garten gehabt und ich möchte da nichts plötzlich so überrascht werden.”

- Susanne, Hamburg



Photo: Christine's fly screen balcony door

When Susanne speaks of her new house, with direct access to the garden through sliding

doors, she also mentions a new type of insecurity based on the particularities of the house. Also finding the windows satisfactory with respect to functionality will naturally depend on the type of house and one's previous experiences.

### **Functionality**

That the window is robust in the sense that it matches the environment is the most important feature and quality in the good window according to the German participants. Being able to cope with seasonal wind and weather is central for creating a safe indoor climate for the residents. To the informants, the 'good window' is defined first and foremost by its environmental adaptability and useability. It must work flawlessly. Otherwise 'dwelling' and the safe indoor environment may be compromised.



Photo: A window used for airing bedding – also part of the qualities of a window

Problems with windows seem to stem from lack of proper insulation, the window frame and the closing system, as Iris describes:

„Ist schlecht isoliert, ist vielleicht auch ein bisschen runtergekommen. Bei so Holzfenstern kann ja schon mal der Lack, die Farbe absplittern. Hat nicht so einen guten Verschließ-mechanismus, leicht öffnbar für Einbrecher. Im Prinzip immer das Gegenteil zu dem, was gut ist.“

- Iris P, Langenfeld

Susanne explains about some of her windows that do *not* provide the necessary healthy indoor environment:

„Diese Fenster sind nicht isoliert hier, das sind keine neuen Fenster und da finde ich echt, wenn man hier so in der Ecke sitzt, dann braucht man eine Decke im Winter. Das zieht wirklich. [...] hier wird es kalt durch nicht isolierte Fenster und auch keine Gardine.“

- Susanne, Hamburg

Maintenance is also part of functionality, such as window cleaning. Some have a window

cleaner, others do it themselves. Too dirty windows may be upsetting, but not necessarily out of consideration for what the neighbours may think. Christine says – followed by Julia:

“Da gibt es eher Möglichkeiten, dass es sich verzieht und unfunktional wird. Es ist schwieriger drin sauber zu machen. Und oft finde ich dann auch, innen schwitzt das Fenster. Wir haben oft im Winter die Fenster sehr beschlagen. Das stört mich.

- Christine Z, Waiblingen

“Wenn die Fenster irgendwann so aussehen, auch durch die Straße hier, dass es so super staubig ist oder wenn ein Sturm war, finde ich das schon wichtig. Aber mir ist es jetzt nicht wichtig wegen der Nachbarn, dass die wissen, wie oft ich Fenster putze oder so.”

- Juliane K, Lüneburg

Also, since glass is a fragile material certain problems may relate to its nature. Silke describes how the glass is damaged:

„Genau, es sieht aus wie Kalkflecken, aber in der Tat ist das Säure, die sich ein bisschen ins Glas reingefressen hat. Man sieht es wirklich, wenn man es weiß, man macht die Tür auf und manchmal im Winter beschlägt auch dann die Scheibe von außen so ein bisschen und dann siehst du es halt. Oder beim Putzen sieht man es und denkt immer, das muss doch abgehen. Aber das ist halt in der Scheibe. Das ist ganz ärgerlich.“

- Silke K, Hamburg

So, while all informants could refer to their favourite window, most could also point out a window that was annoying. Often it was related to the above – problems with the glass or getting it polished, but it could also relate to where it was placed (poor access) or a full windowsill. Hiltrud’s most problematic window does not allow easy access – it prohibits opening or polishing it.



Photo: Hiltrud’s problematic window – and right: Barbara’s bathroom window which is never opened

Despite the fact that functional issues are highly important, the reasons for this are often social: The concern about being able to take care of the health of residents.

## Special focus: Overheating

### Introduction

“... ich finde schon schön, wenn im Sommer die Sonne gut scheint, und dann ist halt das Problem, dass es oft zu heiß wird, aber vom Licht her finde ich das schon sehr schön.”

- Iris P, Langenfeld



‘Overheating’ at home occurs when heating conditions make the residents feel uncomfortable or heat stressed to such an extent that it may jeopardize the sense of well-being at home<sup>9</sup>. Like Iris described in the above quote, most participants, however, seem to endure discomfort from overheating for the sake of light.

Current design guides (like CIBSE<sup>10</sup> Environmental Design, Guide A) recommend temperature thresholds, 28°C for living rooms and 26°C for bedrooms, and define overheating as when these temperatures are exceeded for more than 1% of the time. Overheating results from a combination of:

- The thermal environment (air temperature, radiant temperature, humidity and air velocity/turbulence);
- Insulation of the body (by clothing, bedding, etc.);
- Metabolic rate, hence physical activity and thermoregulatory capacity, both of which may depend on age and state of health

As the above indicates the cause of overheating is complex and not a simple measure of maximum temperatures, which is an unlikely activity of the residents anyway with the exception of a few, like Karin, who explains that their first floor tends to be too warm during summer:

“Ich finde hier oben im Sommer, die Sommermonate oder jetzt teilweise schon im Frühjahr, da ist es hier, obwohl das ja ein großes Zimmer ist, über 30 Grad.”

- Karin S, Köln

Since people in general do not have these temperature data, this section will not deal with specific temperatures or bodily measurements but will instead describe the *strategies* people use against overheating. Again, focus is on human behaviour and the practices that people have, now those relating to sensing, avoiding or minimizing overheating. This makes the report different from many other studies on overheating. Research in this field commonly considers three distinct aspects of user behaviour have: 1. Behaviour causing (or exacerbating) overheating or the risk of overheating; 2. Behaviour responding (or not) to actual or anticipated overheating, with the intention of averting or reducing risks; and

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<sup>9</sup> Studies indicate that long, continuous periods of above-average indoor temperatures in homes may be a significant factor affecting people’s health. In a changing climate with summers getting warmer and a rise in hot spells expected, problems of discomfort caused by overheating will rise too. In a review about overheating it is also stated that more information on human behaviour at home is required (AECOM 2012, downloaded on 16<sup>th</sup> January 2015:

[http://www.zerocarbonhub.org/sites/default/files/resources/reports/Overheating\\_in\\_Homes-Where\\_to\\_Start\\_Introduction\\_for\\_Planners\\_Designers\\_and\\_Property\\_Owners.pdf](http://www.zerocarbonhub.org/sites/default/files/resources/reports/Overheating_in_Homes-Where_to_Start_Introduction_for_Planners_Designers_and_Property_Owners.pdf)

<sup>10</sup> CIBSE is an international organization, Chartered Institution of Building Services Engineers

3. Overheating having an adverse effect on behaviour (e.g. through increasing accident risk or impairing cognitive performance).

For all three it is of supplementary, important interest whether/how these behaviours may/may not differ by factors like building type, building characteristics/orientation, occupant type, location and housing tenure. These insights may, however, best be investigated quantitatively.

Naturally it makes sense to study if specific behaviours of people in fact cause or are at risk of causing overheating, or if overheating creates an adverse effect on behaviour. However, this study examines *actions* rather than cause/effect or residents' responsibility, and has no interest in studying any adverse effects on behaviour that overheating might cause. So this part of the investigation on the significance of a window to Germans when it comes to overheating matches '2. Behaviour responding (or nor) to actual or anticipated overheating or the risk of it'.

### General knowledge among people regarding overheating

“Das ist ein Raum, der sehr hell ist. Da kann man es manchmal vor Licht kaum aushalten.”

- Karl & Christel G, Wuppertal (talking about their office which is often overheated)

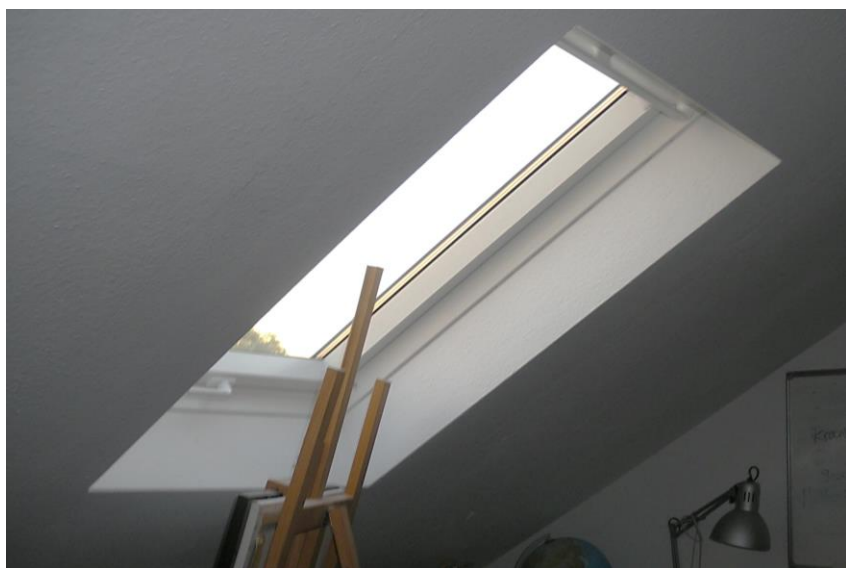


Photo: Barbara's overheated room – almost too hot to stay there

Like Karl & Christel people in general talk about overheating as a problem in particular rooms, but not only caused by the windows but also a result of the placing of the windows, the thickness of the walls, or a consequence of the fact that many windows may not be able to open up wide enough to provide cross ventilation. During warm periods, if the night ventilation air is not sufficiently cool to remove heat from the building, the result will be a gradual build up of heat. Several informants realize this complexity of mixed reasons behind overheating. Georgius explains:

“... also viele Faktoren spielen eine Rolle, was Überwärme angeht. Ich will nicht zu sehr ins Technische gehen, also das hat auch was mit dem Außenmauernbereich zu tun, also wie weit die Wärme nach innen, wie schnell die die Wärme nach innen weitergeben wird. Bei den Dächern kann man das sehr gut sehen, weil wenn viele

Sonnenstunden da sind und das Material ist feinfühlig, was Temperaturen angeht, dann wird das sofort weitergegeben. Es haut dann auch wieder schnell ab. Bei uns ist es eher so, dass der obere Bereich, wenn es ein paar Stunden sonnig ist, dann bleibt es halt ziemlich lange warm oben. Daher kommt da auch, dass so wenig geheizt wird oben. Natürlich hat das auch was damit zu tun, dass unten geheizt wird und dann die Wärme nach oben kommt. Ansonsten, ich glaube weniger, dass das Problem mit den Fenstern ist mit der Wärme, sondern eher das Material drum rum."

- Georgius K, München

Mostly people refer to specific rooms, turning south/south-west, or first floor rooms, as the main problematic areas, as Iris describes in the following two quotes:

"Zu warm ist es im Sommer, wenn sehr stark die Sonne reinscheint. Dann ist das Dachgeschoss schon extrem warm."

But again, many different elements play a role in creating overheating at home, for instance having many people in the same room:

"Das Sonnenlicht ist eigentlich so der Hauptfaktor. Oder wenn man halt zu sehr die Heizung aufdreht. Aber das ist ja dann selbstgemacht. Und wenn natürlich viele Personen darin sind auf lange Zeit, wenn man Besuch hat."

- Iris P, Langenfeld

Christine also refers to the seasonal difference and, contrary to the experience of the seasonal daylight, this difference appears too hard:

"Oben ist es sehr warm, weil das Südseite ist. Also das ist ein sehr krasser Wechsel zwischen Wärme und Kälte jahreszeitenbedingt."

- Christine Z, Waiblingen

Furthermore, people also have very individual sensations on overheating and different needs for feeling the warm air through their bodies:

"Thema Wärme ist noch was anderes. Ich habe dir ja gesagt, dass der Jo sehr oft dieses Bedürfnis hat zu lüften und rauszugehen. Er hat aber gleichzeitig noch einen Tick aus seiner Kindheit. Er liebt dann auf der anderen Seite sich vom Heizlüfter anblasen zu lassen. Der Jo sitzt ganz arg oft abends auf dem Bett bei offenem Fenster und lässt diesen Heizlüfter auf sich blasen."

- Christine Z, Waiblingen

Although overheating may only occur in some rooms, the heat may pervade other rooms: Some rooms may become so warm that they in turn warm up other rooms. This may be useful during cold seasons, but unfortunate during the warm season:

"Im guten Wohnzimmer wurde nicht geheizt und in der Küche wurde geheizt und der Raum neben der Küche wurde praktisch mehr oder weniger durch die Küche mit geheizt. Bei den vielen Menschen auch bei uns hat man gerne den Ofen ganz woanders hingestellt, also vom Kamin weg, und hat dann ein Ofenrohr mitten durch den Raum gezogen. Schön sah das nicht aus, aber der hat mit geheizt."

- Karl & Christel G, Wuppertal

What constitutes the 'right indoor temperature' seems to be very subjective and not necessary relating to exact temperature measurements. What may seem as overheating during summer, unpleasant and too warm, may be wanted in a particular moment or in a particular room for other reasons. Feeling warm is sometimes about *feeling snug*. Susanne describes that in the following:

- "Ich glaube, ich heize auch mal für heute Abend. Dann will ich es gemütlich haben."  
- Susanne, Hamburg

The balance between acceptable warmth and unacceptable seems to depend on people's emotional state also. The above quotes all reflect that overheating is a multifaceted and complex area.

### Strategies against overheating

All in all people refer to overheating as something they can react on or take measures to reduce/avoid, and three main strategies against overheating appeared. These include: 1. airing out; 2. using curtains, etc.; 3. making shaded areas.

#### 1. Airing out

Sensing a room as overheated is something that most informants relate to a lack of airing out, since the hot air seems to build up. Ingo explains how his strategy is to air out:

"Das Lüftungsverhalten. Wenn ich nicht lüfte, die Sonne, auch wenn sie an nicht so heißen Tagen permanent draufscheint, auch dann hat man diesen Effekt, dass sich dieser Raum aufheizt. Die Wärme steigt ja von unten nach oben und wenn oben nicht gelüftet wird, irgendwann staut sie sich natürlich."

- Ingo L, Troisdorf



Photos: Julia's bathroom with access to the balcony + good ventilation/through breeze options

Also Kathrin explains how she tries to create a through breeze if it feels too hot at home:

“Die warme Luft staut sich da. Dadurch dass ich immer hier zentral aufmache, die staut sich da und dann lasse ich hier erstmal zu, bis die Sonne weg ist. Die geht dann irgendwann da rüber und dann fange ich an hier zu lüften. Im Schlafzimmer ist es egal. Klar, wenn es richtig heiß ist, da ist dann die Sonne. Also morgens kurz. Und wenn es richtig heiß ist, machst du da auch erst spät auf, dann machen wir Durchzug. Dann machen wir also alle Türen gegeneinander auf und lassen einmal austauschen und dann wieder zu. Das bringt dann schon was. Aber dann lüften wir bedachter. Im Moment reiße ich einfach alles auf.”

- Kathrin S, Köln

Susanne also describes how she uses the air flow to reduce overheating:

“Wenn es richtig heiss wird, dann machen wir halt schon, dass wir auch zum Beispiel hier haben so Oberlichter, die kann ich nochmal zeigen, die gehen elektrisch hoch oder hier in den alten Sachen wo es noch nicht neu ist, dann machen wir es manuell, dass wir es so hochdrehen and dann lüften wir, damit kühle Luft auch reinkommt, abends und morgens.”

- Susanne, Hamburg



Photos: Left, Christine's giant fan; right: Karin's bedroom being aired out on a hot day

Most informants refer to the need to air out precisely as a measure against overheating and a sense of discomfort – and some have bought fans to at least get the air circulated (like Christine, see photo), others may even consider buying 'Klima-anlage', if it is not possible to open the windows. Lutz explains:

“Wenn es zu heiß ist in so einem Raum und man es auch nicht durch Lüften hinbekommt oder mal ein paar Jahre zurückgeblickt, wenn man nicht so richtig lüften kann, das kann schon richtig unangenehm sein. Da ist man kurz davor, eine Klimaanlage sich anzuschaffen.”

- Lutz B, Wuppertal

Georgius explains that he, when airing out, opens the windows wide up to make the house



less heated:

“Dass man auch manchmal, wenn man jetzt oben ist, ganz aufmacht und auch mal die Luft richtig reinlässt. Dann geht das auch. Das Haus ist recht groß und dadurch ist es weniger wärmeanfällig.”

- Georgius K, München

He continues describing that he usually finds it warm enough and for instance has no desire to sit in the sun for breakfast:

“Es ist schon mal der Gedanke gekommen, dass man sich einfach auf die andere setzt zum Frühstück, weil dann die Sonne einfach da ist. Aber ich sage jedesmal, es ist immer noch warm. Also wenn es jetzt warm ist, dann ist es noch warm genug, dass man auch schattig auf der Seite, dann sitzt man halt im Garten.”

- Georgius K, München

With a few exceptions most informants appeared not to be that affected by overheating, but it was certainly a sensation known to them. Christine remembers staying with her sister and not being able to sleep well precisely because of an overheated bedroom:

“Wobei muss ich zugeben, wenn ich bei meiner Schwester bin, ich schlafe da schlecht. Das ist zu hell. Ich kann keine Rollläden runtermachen. Im Sommer schlafe ich bei ihr schlecht.”

- Christine Z, Waiblingen

The quotes above underline the diverse perception of overheating.

## **2. Prophylactic measures: Curtains, blinders, etc.**

The German participants in the study had various ways of trying to control the solar radiation. These included the use of curtains, blinds, shutters, awnings, sunblinds, canopies, or using plants or decorating large windows to keep out or reduce the sun.



Photo: Very warm childrens' bedroom in Karin's home

Juliane describes how she bought specific heat resistant blinds for the attic:

“... auf dem Dachboden würden wir auch die Fenster aufmachen oder manchmal auch sagen, okay, das wird heute heiß, dass wir das mit dem Rollo abdunkeln. Also das ist schon so ein Rollo, was wir auch gekauft haben, was so ein bisschen auch das Licht weg... also es soll im Winter ein bisschen erwärmt sein, also wärmespeichernd sein und im Sommer schon auch, dass es ein bisschen die Wärme abhält. Da gibt es ja verschiedene Sachen bei den Rollos auch, oder auch bei den Plissees.”

- Juliane K, Lüneburg

Using the blinds/curtains/sundblinds strategically is a very common activity among several of the informants. In the following couple of quotes, Michael explains:

“Das einzige ist wieder die Geschichte mit dem Vorhang, wo so ein bisschen Bezug oder Einfluss... Sonst haben wir gar nichts. Wir machen tagsüber schon mal im 1. OG oben die Jalousien im Hochsommer runter, wenn die Sonne zu stark knallt, damit sich die Räume nicht zu sehr aufheizen im Hochsommer.”

“Die Markise ist im Hochsommer Maximum draußen. Die lässt sich 4 Meter rausfahren. Dass so wenig Sonnenstrahlen hier rein... Die ist 5,50 Meter breit und 4 Meter tief. Die ist sehr tief. Also im Hochsommer maximal Markise ausfahren. Jalousie brauchen wir dann nicht mehr. Nur halt die Tür muss zubleiben. Dann ist es unvorstellbar, wenn andere also abends schwitzen, gehen wir rein und du hast überhaupt kein Problem im Hochsommer.”

- Michael R, Düsseldorf



Photo: Karl lets down the blinders to avoid overheating

The result of controlling the solar radiation contributes to maintaining the sense of well-being, a safe indoor climate, for the family:

“Fast schon zu frisch, wenn man nur hier unten sitzt. Das merkst du halt, du bist draußen in der Hitze, machst die Tür zu und gehst plötzlich hier rein und schon im ersten Sommer merkst du: Boah, bleibt das hier unten schön kühl und frisch drin.”

- Michael R, Düsseldorf

People appear to be willing to spending a considerable amount of time on finding the right blinds/curtains or sunblinds/canopy, illustrating that overheating *is* a matter of concern – and, not the least, a matter of negotiation:

”Wir haben hier sozusagen so eine Zone durch dieses Fenster in die Küche, hier knallt die Sonne dann nochmal so ab nachmittags/abends richtig ein. Meine Mutter und meine Schwester sind im Sommer 2, 3 Wochen hier und wenn wir dann vorbereiten, sagen die sehr häufig: ‘Das hält man hier nicht aus, du musst mal hier irgendwas machen an Sonnenschutz.’ Da sind wir jetzt ehrlich gesagt schon so ein bisschen dran und ich kriege da keine richtige Idee. ... diese Jalousiegeschichten, die jeder so ein bisschen hat, aber die findet Oliver total doof, diese Plisseesachen ... eine Markise von aussen ... aber das findet Oliver ... ein einfaches Bastrollo, der hat mir dann so Modelle für Bastrollos gemacht. Ich habe noch die Modelle und das hängt jetzt gerade wieder”

- Susanne, Hamburg

So other people than the residents themselves may notice overheating, showing overheating as very individual and that perhaps residents adapt and endure higher temperatures than they would elsewhere. Still, as described in the introduction to this theme, the sensation of overheating may depend on emotional factors too.

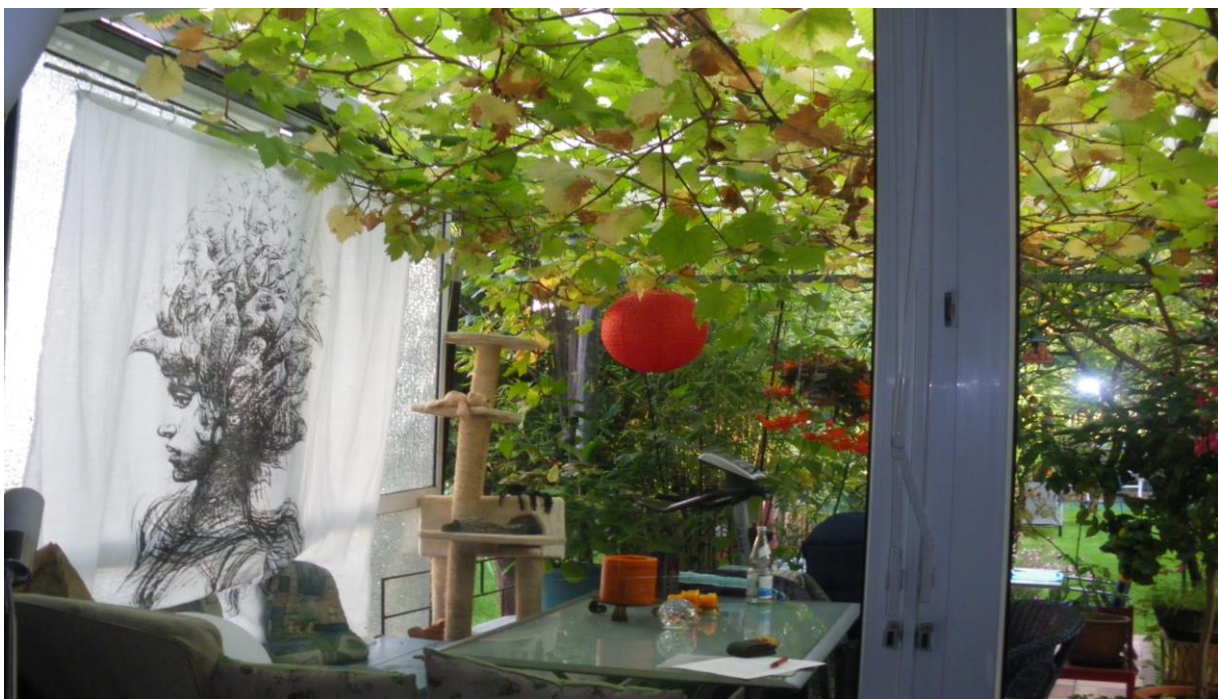
### 3. Making shaded areas

Making use of overheating - the warmth from a particularly sunny spot - appears in people’s strategies too. Using windows for drying the clothes is one way. Here the clothes provide shade at the same time.



Photo: Velux windows with multiple functions

The shade gained from a canopy and closed doors, together with ventilation systems, may make it pleasant inside, while very warm outside. Most of the time, however, the shade that people create is gained from curtains, canopies, awnings, pull-downs or sunblinds, as the following photos illustrate.



Photos above: Julia's and Michael's homes resp.

Photo below: Barbara's favorite window because of the view to the greenery and the shaded window

### **Summing up on overheating**

The German participants tried to prevent overheating in various ways. If the overheated home office was too hot, Barbara would just work outside on the balcony. And Karl and Christel had made it a routine to let down the blinds in the office from the early morning, trying to minimize the overheating. So people are creative in their problem solving, also when it comes to overheating.

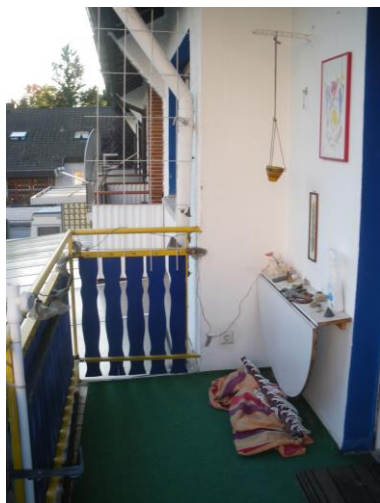


Photo: Barbara's balcony which is an extended workplace when the office is too hot

Comparing the above 3 areas of actions – airing out; curtains; shaded areas – with the English design guide made by Department for Environment, Food & Rural Affairs on how to combat overheating it seems that the German participants in fact mostly act within the recommendations. The suggestions given in the guide involve a mixture of elements, precisely as seen in the homes of the Germans. Referred recommendations in the design guide include the following:

Thermal mass: Utilising the benefits of additional thermal mass in the design, for example concrete floors. These measures must be used in conjunction with secure and cool night-time purge ventilation.

Solar shading and shutters: Many external shading devices and shutters are available (including automated systems that sense risk of overheating). These can be used to good effect to reduce the heating effect of the sun.

Cooling ventilation strategies: Enabling a home to have an effective passive cooling strategy (including purge ventilation) has many benefits, particularly if it can utilise cross ventilation through the home. However, correct operation does rely on occupants understanding how it should be used.

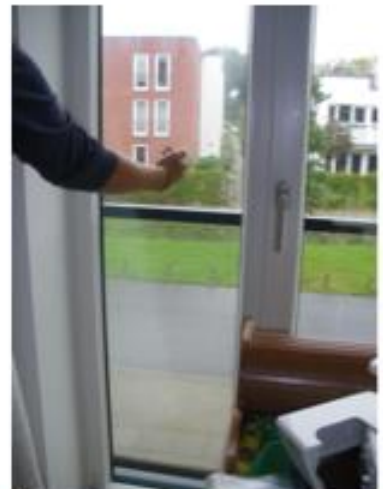
Heat reflective finishes: Light external finishes on homes and reflective roofs or green roofs play a part in keeping temperatures down.

Planting: Plants can provide valuable shade and cooling effects for individual homes. Deciduous trees, vines and climbers have been used very effectively to reduce overheating risk and can also contribute interest and biodiversity.

So, in general the German participants have strategies that involve many of the above suggestions, but may sometimes be prevented from airing out because of lack of access to the window or because they would have to empty a windowsill.

For further information on the recommendations:

[http://www.zerocarbonhub.org/sites/default/files/resources/reports/Overheating\\_in\\_Homes-Where\\_to\\_Start\\_Introduction\\_for\\_Planners\\_Designers\\_and\\_Property\\_Owners.pdf](http://www.zerocarbonhub.org/sites/default/files/resources/reports/Overheating_in_Homes-Where_to_Start_Introduction_for_Planners_Designers_and_Property_Owners.pdf)



## **PART IV: Summary of main findings**

This study has investigated the significance of the window as it appears to 17 German households. All participants ascribed high status to the window in their lives, which to a high degree was due to their appreciation of the influx of daylight. Daylight is in great demand by the interviewees because, as they express, it contributes with:

- life and energy, joy of life and inspiration, health and cleanliness (thereby reducing the risk of winter depression)
- a daily and seasonal rhythm by being able to follow processes in the immediate surroundings through the provision of daylight
- light to see by
- character to the form and colour of the room.

Based on in-depth interviews, photos and cultural probes it was possible to distill what qualifies as the 'good window' to the participants. In the eyes of the common participant in the German study, the 'good window' has the following characteristics, prioritized as follows:

### **The 'good window'**

1. must be able to withstand the climate and keep cold and damp out and function trouble free
2. gives maximum daylight
3. must match the style of the house and the rooms
4. provides a view that is (preferably) beautiful or displays social activity and allows the resident to follow the course of the year and its seasons
5. must be placed correctly, according to the size of the house and the heights of the residents
6. must be openable (for ventilation) and yet have various ways of closing
7. must be easy to maintain
8. must function as a safe border to the world outside (which explains the reason for the home owner wanting control over the view in)
9. has a window sill
10. must not dominate the public room (must not have too large glass facades)

### **What windows do for people: A range of usages**

Both the preliminary analysis of the cultural probes as well as the interviews is an attempt to get closer to ordinary people and to gain a more in-depth and empathic understanding of them, their actions, their needs and their concerns relating to the windows in their lives. In today's modern society an increased level of individuality has made it difficult to generalize about behaviour. Today it is up to each individual to create his or her own little life story and establish their own practices, selecting individual elements – including the window – and symbols (like those in the windowsill and the window) that can be part of their life and the story of their family. The windowsill is in a way loaded with symbols, and becomes a platform for communicating with the world.

The glass is used strategically as well, e.g. in connection with celebrations, where the windows and the windowsill are decorated, e.g. with candles so that the glass's reflection of the flame will be extra visible in the dark time.

But the window is also a source of uncertainty and makes people for example put up an extra curtain or put on another lock to reduce the risk of burglary.

The 6 themes that collectively describe what the window does for people can be placed in the reference model on the properties of the window (Fig. 1). It appeared from the analysis that the characteristics of the window could be categorized according to

functional, bodily and social qualities:

- “Functional qualities” refer primarily to the themes ‘view onto the world and inside the home’; ‘security & functionality’.
- “Bodily qualities” were mostly reflected in the themes ‘Daylight & types of light’; ‘to follow the sun and the seasons’
- “Socio-cultural properties” appeared in particular in the themes ‘Daylight & types of light’; ‘the window’s role in the social life’; ‘security and functionality’.

The analysis and the identified themes confirm that it was possible to use the model as a reference model. The same applies to the description of the components of the window-related practices, competencies, images and materials.

### **What people do with windows in *practice*:** **A mix of Competences, Images and Materials**

*Competences:* From the stories about following the sun, it was clear that the window contributed to the residents building up a knowledge repository of the sun and the daylight. This appeared to contribute to the feeling of well-being. Knowing how to make the most of the daylight from the windows through the day/year, was another competence tied to the window. Other competences relate to maintenance, which appeared as something people needed to do (polish and painting) and how to do it, and knowing how to avoid burglary.

*Images* that emerged during the analysis seem to relate to the window sills’ symbolic arrangements and the strategic use of curtains/sunblinds etc. But also the idea of preferring large glass surfaces to enable as much light as possible to enter. Another image that came forth related to the comments from many informants about how ‘windows should match style of the house’, i.e. a window should have an aesthetic expression which seemed pleasant and would give a good overall impression of one’s home. The renovated apartment in Berlin showed residents’ concern about well-being, as represented in the ‘daylight showering’ bathroom with its skylight above the shower.



Photo: Uli’s bathroom

*The materials* that accompanied the window were, apart from the window itself, about decoration, maintenance and the windowsill. Having a high quality of glass that provides insulation and a frame that requires as little maintenance as possible appeared, but also a need for being shielded against insects as well as annoyance about opening options, making the ‘half-split’ window a preferred window. In some houses where there for example were no windowsills, it was considered a flaw.

### **The window’s relation to comfort**

The study shows that the windows of the participants influence how they experience ‘comfort’ in their own homes. People do not use the word ‘comfort’ but more ‘well-being’, to feel ‘at ease’ and to be ‘comfortable’. The well-being, which people refer to, is mainly



related to the window's importance to the body and senses - i.e. the themes of daylight and following the sun and the seasons. Also certain practices related to the window, illustrated by the story of the oriental rug that might be bleached by the sun and hence curtains were slightly more drawn or how people enjoyed following the social life and their children playing were element of everyday life and the use of the windowsill by the children, show the window's status in people's lives, and that the window may even be considered to contribute to people's identities.

### **Considerations when purchasing windows**

Besides seeing social and physical values of the 'good window' as indirect reasons for using it, it may be of interest to briefly pass on what other parameters the informants found important when discussing what they wanted from new windows.

Naturally, there is a main difference in your interest in windows depending on whether or not you design/build your own house or buy an existing. Ingo says:

„... aber ich glaube, wenn man etwas selber macht, selber plant, wir haben es ja auch selber geplant, da muss man sich ja über alles Gedanken machen, auch wenn man vielleicht nicht so die große Ahnung davon hat. Aber man geht dann schon rum, seien es Bodenbeläge, Tapeten oder auch Türen, da informiert man sich, was man haben möchte. Die Frauen vielleicht eher, was ist optisch schöner. Die Männer dann vielleicht eher auf den KW-Wert oder eine Vorderholztür oder eine Spantür. Da muss man halt irgendwo einen Kompromiss finden. Insofern muss man, wenn man selber baut, sich wirklich um jedes Detail dann kümmern. Da haben Fenster einen relativ hohen Stellenwert eingenommen. Fassade und Fenster müssen ja aufeinander abgestimmt sein. Hier ist es jetzt so, wir haben ja draußen auch zum Teil, zumindest vorne, Schlagläden dran.“

- Ingo L, Troisdorf

The primary considerations among participants were related to price, but other aspects also emerged, such as 'the window should be easy to open for safety reasons', as Georgius describes in the following quote:

„Ich würde sagen, das ist eine Preisfrage. Andererseits bin ich mir nicht sicher, wenn der Feuermelder losgeht nachts, ob man dann so viel Courage hat und die Schlüssel sucht. Man hat auch teilweise Panik vor Feuer. Also das müsste halt von innen schon recht schnell aufgehen können, ohne dass man irgendwie einen Schlüssel hat oder so. Ich muss dazu sagen, wir haben die Fenster nicht selber renoviert. Aber wenn wir die genommen hätten, dann hätten wir auch sowas in der Richtung, weil vom Preis her ist das kein so großer Unterschied, also nimmt man dann auch gleich Schallschutz.“

- Georgius K, München

The preferred style of windows is individual; Christine does not want double glass in her future windows:

„Also was ich schon gesagt habe, wenn es die Möglichkeit gäbe, möglichst integrierte Fliegengitter reinzumachen, das wäre für mich ein Grund das anzuschaffen, wenn es optisch nicht so beeinträchtigend wäre. Ich finde das immer noch nicht so schlecht, dass es da zum Teil reinzieht. Also diese Vorstellung, das wäre sehr dicht alles, ich glaube, das fände ich nicht gut. Optisch auch nicht. Also klar, ich meine, hier blättert

zum Teil die Farbe ab. Das würde ich natürlich schon bei neuen Fenstern geändert haben wollen. Aber ich hätte jetzt nicht gern die Fenster irgendwie anders oder Sprossenfenster oder... Keine Doppelglasfenster mehr. Das erscheint mir sinnlos. Aber wir haben die halt auch so übernommen. Ich weiß nicht, von wann die sind.“

- Christine Z, Waiblingen

Georgius mentions an interesting aspect about upgrading options that he would have preferred and suggests to have codes in/at the window for making the process of upgrading easier:

„Aber ich habe mir auch mal Gedanken gemacht, die Aufrüstbarkeit wäre mir wichtig als Laie, zum Beispiel ich stehe dann da und habe keine Ahnung, was ich da kaufen kann, wie ich das machen kann, wie ich das aufrüsten kann. Es wäre sicherlich hilfreich, wenn da irgendwo so eine Artikelnummer am Fenster wäre. Das habe ich zum Beispiel nicht gefunden. Eine Artikelnummer und dann könnte man das im Internet mal nachschauen. Weil solche Sachen gestalten sich schwierig, wenn man dann zum Händler geht und der Händler sagt, okay, ich muss kommen und wenn er dann kommt, dann hat man nur ein Angebot, dann kommt dann der nächste und es ist ziemlich zeitraubend. Deshalb wäre es ganz toll einfach zum Händler zu gehen, sagen, da, ich habe diese Artikelnummer, such mir bitte die Aufrüstmöglichkeiten auf. Also dass das halt skalierbar wäre, wäre eigentlich eine schöne Sache.“

- Georgius K, München

Quality seems vital, but also the advice of skilled people. Michael explains:

„Irgendwann sitzt du da mit den Leuten von den Bauträgern zusammen und die sagen dir, was man machen sollte und nicht machen müsste und die haben mir dann gesagt: Nimm auf jeden Fall die 100 Euro in die Hand sinngemäß an Aufpreis für das Kunststoffendflächenfenster von Velux, ich weiß nicht, ob das andere auch von Velux gewesen wäre, weil es lässt sich besser reinigen oder es ist weniger zu reinigen, es hält länger, es ist wartungsärmer, es verzieht sich weniger, es ist einfach eine Investition.“

- Michael R, Düsseldorf

Although price appeared highly important, functional and aesthetic features were stated also, precisely as indicated in what the ‚good window‘ signifies. Susanne says:

„... es ist wieder die Funktion und Ästhetik, dass beide Kriterien erfüllt werden, ja das finde ich natürlich. Wenn ich jetzt ein neues Fenster mir anschaffen würde, würde ich darauf Wert legen. Und so würde ich jetzt eher gucken, was passt jetzt so zu der Vorgabe. Da werden die Scheiben ausgewechselt, aber die Grundstruktur bleibt jetzt eher gleich.“

- Susanne T, Hamburg

### **Final comments**

As a facilitator of daylight from the sun and giving residents a view onto the world (and into the home), the window appear crucial for helping people provide them with well-being at home. But the window is about much more than just well-being, enjoying a view or practical use in everyday life: the window has a direct impact on the knowledge that people have about their environment – following the day and season by amount of hours

with solar influx – and about interior furnishing etc. People take care not to be blinded by the sun and try to avoid having rugs sun bleached. They have strategies for avoiding overheating, like using the window for both drying clothes as well as providing shade. The diverse ways of using the window and the positive connotations reflect that the window itself helps anchor people in the world they inhabit, by keeping them active, alert and in constant interaction with their surroundings behind a safe barrier, the window. But the window also implies a certain degree of uncertainty for people, in terms of maintenance and having a safe exit in case of fire, and some have concerns about the window as a possible entry point for burglars. In a way the window contains double and conflicting meanings, but has *by far* mostly positive connotations and a high status among the interviewed Germans.

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## **Appendix 1: Coding list for Atlas.ti, 'The significance of a window-DE'**

1. Dagslysets værdi og betydning
  - a. Positive udtalelser
  - b. Irritationsmomenter ved dagslys
2. Dårlige erfaringer med vinduer
3. Typer af dagslys – samt underkategorierne:
  - a. Filtret lys
  - b. Diffust lys
  - c. Lys, der blænder/skarpt lys/direkte lys
  - d. Sæsonbestemt lys
  - e. Lysets betydning for farver eller hjemmets indretning
4. Udsigt
5. Indsyn
6. At følge solen
7. At følge årstiderne
8. Vinduets iscenesættelse (hovedgruppe for flg.):
  - a. Vindueskarmen
  - b. Gardiner, skodder, markiser mm.
  - c. Udsmykning af vindue/glas/ramme
9. Vinduets placering
10. Vinduesrammen
11. Vinduets rolle i det sociale liv (fx om man kan lide at følge med i livet udenfor)
12. Sikkerhed/sikkerhedsspørgsmål (fx)
  - a. At kunne åbne (og dermed komme ud gennem vinduet )
  - b. Indbrudsrisici
13. Funktionalitet
14. Vinduespudsning
15. Overophedning (for varmt, hvad gør de)
  - a. Strategier mod
  - b. Hvornår
16. Udluftning
17. Nye vinduer, købsovervejelser (her vil sikkert gemme sig flere temaer – må evt. brydes op i underkategorier, men indtil videre bare én kode)
18. Well-being/sundhedsrelation/krop
  - a. SAD
  - b. Kroplig nydelse/sanselighed