

The Science of a Happy Home Methodology

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Note to reader:

This document is a supplement to Resi's 2020 report 'The Science of a Happy Home'. The full report can be downloaded [here](#).

A Literature Scan Summary, Policy Recommendations, Industry Insights paper and a copy of the national data set used to develop these findings can be found [here](#).

Research Context

Key Context

The Science of a Happy Home is a project about how the design and the use of our homes influences our wellbeing. It has been spearheaded by Resi, the UK's leading architecture practice for everyday homeowners. Resi's ambition is for this body of research and insight to grow over time.

As a first step, Resi commissioned an independent¹, exploratory enquiry to highlight credible evidence on how the design and use of our homes relates to our happiness and wellbeing. Resi's ambition is for this body of research and insight to grow over time. Further research to look at revealed preference and qualitative engagement with multiple members of the household are two clear avenues for this.

The Science of a Happy Home synthesises and summarises existing evidence and, combined with original findings based on subjective survey data, we suggest insights to apply to the diverse practices of how we build and improve our homes.

¹ The research was undertaken between August and September 2019 by the Underdog Collective - a diverse group of researchers, strategists and designers who bring rich local and international perspectives to their specialist domains of architecture, statistics, wellbeing and geography. A breakdown of contributors can be found in the main report.

A national survey of 4000 UK adults was administered by Populus in August 2019, building a dataset that links to established benchmarks such as the English Housing Survey, as well as providing new correlates for subjective wellbeing at home.

As part of this survey, the public were asked to describe their homes using the OCEAN framework, a personality framework widely used by psychologists. We presented people with ten home personality traits through which to describe their homes. From this we learnt that how we describe our home correlates significantly with how happy we feel at home. These findings underpin our six qualities to define a happy home.

Research Design

Research Summary

The purpose of this research was to understand how design interacts with wellbeing in the home. To achieve this, we used both secondary source data from relevant literature and conducted a primary research exercise.

Key research questions:

Q1. How do specific spatial design and feature characteristics of the home impact on wellbeing?

Q2. How important are these characteristics relative to each other?

Q3. How does undertaking a home transformation project interplay with happiness at home?

To answer these questions, we undertook a broad literature review to identify established, empirical frameworks of wellbeing and causal links between design characteristics and wellbeing outcomes. Over 100 reports, research papers and books were reviewed as part of this process. You can read our [literature scan summary here](#). Critical analysis of this existing research helped us to design a primary research exercise with two elements:

A UK wide bespoke survey with 17 questions was administered by Populus through their Omnibus panel. Populus are a British Polling Council accredited provider, who have a panel of over 165,000 respondents who are offered a financial incentive for taking part.

Resi targeted engagement. A bespoke Resi survey was developed and implemented through semi-structured video interviews. Resi used their communications channels to recruit respondents.

The table below provides more detail on the justified approach for each research question.

Q1 How do specific spatial design and feature characteristics impact on wellbeing at home?	Literature Review and National Survey Insights to: <ul style="list-style-type: none">• Identify empirical, established frameworks of wellbeing to develop an understanding of wellbeing at home.• Perform critical analysis and identification of empirical causal links of spatial design and feature characteristics and wellbeing.
Q2 How important are these characteristics relative to each other?	Literature Review and National Survey Insights to: <ul style="list-style-type: none">• Hypothesise interdependencies across multiple characteristics and speculate effect variance across space/ household types.• Develop a matrix that presents key interaction effects as a result of interdependencies.
Q3 How does undertaking a home transformation project interplay with happiness at home?	Resi targeted engagement <ul style="list-style-type: none">• Design of semi structured interviews for video interviews.• Develop a nuanced understanding of motivations, processes and wellbeing interactions in relation to home transformations.

Data Collection

National Survey

The survey provided a broad, detailed dataset from a sample of 4135 responses. The data was collected via Populus, a polling agency and member of the British Polling Council. The survey ran between 22nd - 28th August 2019. This data from the survey was used to perform statistical analysis and our findings are referred to throughout the report.

A full list of survey questions can be found in Appendix A.

Where possible, questions were informed by a benchmarking exercise which sought to align our questions with precedents from established questionnaires including the Census and other governmental surveys.

Resi Client Engagement

Through targeted engagement and video interviews, we were able to explore the more personal experience of home and these interviews informed our understanding of wellbeing at home.

Interviews provided a smaller data sample, with 16 individuals interviewed. Interviews were conducted via video call and advertised through Resi's social media and email channels and conducted with customers and consumers familiar with the company. This sample enabled insight into the very personal space of the home, which is difficult to observe without an in depth discussion. The interviews took place in August and October 2019.

The interviews were semi-structured, with the interviewer asking scripted questions and pursuing areas of interest as they arose. The scripted questions can be found in Appendix B.

Interviews typically lasted between 30 – 50 minutes and were conducted over phone or video call. Participants were offered compensation for their time in the form of a £25 voucher to a homeware store or a donation to a homelessness charity.

Survey Data Analysis

Home Happiness Measurement

To understand how happy people are at home, we asked three types of questions.

First, we asked people to evaluate their home satisfaction on two scales. Home satisfaction refers to how you feel about your home and helps us identify the things you can do to your home to make you happier at home.

Secondly, we asked people about the emotions they feel at home, for example how often they feel happy, sad, proud and embarrassed at home. These complementary evaluative and emotional lenses are our proxies for home happiness.

Thirdly, we asked people about their life satisfaction overall. Life satisfaction refers to how you feel about your life overall and helps us identify the things you can do to your home to make you feel happier overall. This provides for greater analytical potential, highlighting where some features of the home might improve (or worsen) how we say we feel about our lives - but not have the same, or as strong of an effect, about how we feel at home.

It is important to understand that the data generated represents subjective measures of how people say they feel, as opposed to objective measures of wellbeing. Broadly speaking, the statistical

effects on all four outcomes measures that we used (life satisfaction, home satisfaction, happy-sad balance and proud-embarrassed balance) were similar, with effects of home variables on life satisfaction being smaller than those on home satisfaction.

Demographic Controls

We looked at age, household income and social grade, disability, working status, relationship status, religion and ethnicity, education level and home ownership. We looked at the relationship that each of these had on our outcomes and looked at them simultaneously to understand their independent effect.

This demographic breakdown can help better understand some of the differences between groups. For example, are older people more satisfied, on average, because a higher proportion of older people own their home, or is there an independent effect of age such that they are more satisfied than younger people regardless of whether they own their home or not?

To identify these components we explored existing literature and reports. We also sought to explore the interdependencies across multiple characteristics, identifying where there are proven and plausible links between components. For example, large windows can be good for natural light and thermal gain, but can be detrimental to privacy.

We also looked to speculate about effect variance across space and household types, to account for the realities of how space is used by residents. For example, noise from outside the home is generally higher during the day which may have more of a negative impact on people who work from home.

We did this in order to better understand how elements of the home interact together or against each other.

We also took a number of questions to understand what their specific effect was in relation to the house. These were tested one by one to be able to assess their independent impact.

We looked at:

- Length of residence (i.e. how long someone has lived in their home)
- Home type (e.g. flat vs. house)
- Room inventory (what kinds of rooms they have in their home)
- Subjective assessments of their home
- How people describe the personality of their home

We were mostly interested in the *independent* effect of these variables, controlling for all demographics. So for example, what is the expected difference in home satisfaction for two people with identical demographics (in terms of age, income, marital status, etc.)

Base Model Development

The independent effects of these variables were calculated through multivariate regressions controlling for a 'base model' of all demographics which had a significant effect on home satisfaction.

The base model was built with the following demographic characteristics: Age and age squared, Household income, Holiday in the last 3 years, Disability, Working status, Marital status, Religion, Region, Education level, Home ownership.

It is possible that some of the positive relationship between each individual question and home satisfaction may simply be a result of a bias to report feeling satisfied, or a more general positive assessment of the home, rather than an assessment of the specific aspect being asked about.

To manage this, we carried out a separate set of regressions, one for each item, where we controlled for 'average satisfaction' to ensure we report significance correctly. Because we controlled for 'average satisfaction', the effect sizes are not comparable with other questions sets.

It's important to note that we did not have a clear picture of how many people live in each household, so whilst we could explore whether additional rooms were beneficial, we could not calculate a measure of overcrowding.

Appendix A

National Survey Questions

Survey was administered by Populus. Nationally representative sample of 4135.

Overall, how satisfied are you with your life nowadays?

10 – completely satisfied – 0 – not satisfied

Don't know

Overall, how satisfied are you with your home?

Very satisfied

Satisfied

Neither satisfied nor dissatisfied

Dissatisfied

Very dissatisfied

And if you were to rate your satisfaction with your home on a scale of 0-10 how would you rate it?

10 – completely satisfied – 0 – not satisfied at all

Don't know

How often does your home make you feel... Happy /Sad /Proud/ Embarrassed/ Relaxed/ Stressed

Always

Often

Sometimes

Rarely

Never

Don't know

How long have you lived in your home?

Less than 12 months

More than 12 months but less than 3 years

More than 3 years but less than 5 years

More than 5 years but less than 10 years

More than 10 years but less than 20 years

20 years or more

Don't know

For how long do you think you will remain living in your current home?

Less than 12 months

More than 12 months but less than 3 years

More than 3 years but less than 5 years

More than 5 years but less than 10 years

More than 10 years but less than 20 years

20 years or more

Don't know

Which of these categories describes your home?

A whole house or bungalow that is detached

A whole house or bungalow that is semi-detached

A whole house or bungalow that is terraced (including end-terrace)

A flat, maisonette or apartment that is in a purpose built block of flats or tenement

A flat, maisonette or apartment that is part of a converted or shared house (including bedsits)

A flat, maisonette or apartment that is in a commercial building (for example in an office building, hotel or over a shop)

A mobile or temporary structure (for example a caravan or other mobile or temporary structure)

Don't know

Thinking about paid work or volunteering that you do in a typical week, how often do you work from your home?

On at least half of the days worked

For at least one hour per week (but less than half of the days worked)

Not at all (or for less than one hour per week)

Not applicable - I do not do paid work or volunteering from home

Don't know

How many of the following do you have in your home? Bedroom/ Bath Shower/ Toilet/ Living Space/ Balcony (that you can sit on)/ Garden/ terrace/ patio (shared)/ Garden/ terrace/ patio (private)

0 - 6+

Do you have an open plan room in your home that combines a living room with kitchen/cooking facilities?

Yes

No

Don't know

My home reflects who I am

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

There is somewhere in my home which I feel is just my space

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

There is always something to worry about in terms of looking after my home

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

There is enough space for storage in my homeMy house is equipped to meet all my needs

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

As a household, we often have conflicts about how we use the space in our home

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

Not applicable to my home

Don't know

**My home is distinctive/ conventional/ organised/ hostile/ humble/ relaxed/ sociable/ messy/
private/ unbalanced**

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

Not applicable to my home

Don't know

Which room generates the most conflict between household members?

An Open Plan Space

A Living Space

Kitchen

Bedrooms

Bathroom

Garden

Nowhere

Not applicable to my home

Don't know

Which room needs the most improvement?

An Open Plan Space

A Living Space

Kitchen

Bedrooms

Bathroom

Garden

Nowhere

Not applicable to my home

Don't know

Which room is most important to you?

An Open Plan Space

A Living Space

Kitchen

Bedrooms

Bathroom

Garden

Nowhere

Not applicable to my home

Don't know

Which room requires the most maintenance?

An Open Plan Space

A Living Space

Kitchen

Bedrooms

Bathroom

Garden

Nowhere

Not applicable to my home

Don't know

In which room do you find you can best switch off and relax?

An Open Plan Space

A Living Space

Kitchen

Bedrooms

Bathroom

Garden

Nowhere

Not applicable to my home

Don't know

If you were given £1000 to improve a room, in which room do you think it would make the biggest difference?

An Open Plan Space

A Living Space

Kitchen

Bedrooms

Bathroom

Garden

Nowhere

Not applicable to my home

Don't know

In which room do you most enjoy spending time with the people you live with?

An Open Plan Space

A Living Space

Kitchen

Bedrooms

Bathroom

Garden

Nowhere

Not applicable to my home

Don't know

How satisfied are you with the following:

Size of biggest bedroom

Size of smallest bedroom

Sunlight in rooms

Temperature in winter

Temperature in summer

Natural ventilation (flow of air throughout your home)

Views of outside from your home

Ability to change room use e.g. create a work area or temporary bedroom

Ability to personalise your space with objects and possessions

Ability to change the layout of the rooms as your needs change e.g. furniture

Very satisfied

Satisfied

Neither satisfied nor dissatisfied

Dissatisfied

Very dissatisfied

Not Applicable

Don't know

And lastly... Thinking just about households who are privately renting their home, to what extent do you agree with the following statements?

The government should make it illegal for a landlord to let a property that is unfit for human habitation

Landlords should be able to automatically evict tenants who have not met the requirements of their rental contract

Tenants should be able to decorate and alter their homes as they wish e.g. hang pictures on a wall

Landlords should be able to expect that their properties have not been substantially altered by the end of a tenancy

Landlords should be able to expect that their properties have not been substantially altered by the end of a tenancy

The government should require landlords to offer rental contracts which cover 2 years of tenancy

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

Not applicable to my home

Don't know

Below are standard questions asked as part of the Populus Omnibus Survey.

Gender

Male

Female

Prefer not to say

Age

14-17

18-24

25-34

35-44

45-54

55-64

65+

Refused

Do you have any children living at home with you?

No children

Yes - children aged under 5 years old

Yes - children aged 5 to 10 years old

Yes - children aged 11 to 17 years old

Yes - adult children (aged 18 or older)

Prefer not to say

Don't know

Social Grade

A

B

C1

C2

D

E

Refused

GO Region

Scotland

North East

North West

Yorkshire & Humberside

West Midlands

East Midlands

Wales

Eastern

London

South East

South West

Northern Ireland

Refused

Have you taken a foreign holiday in the last 3 years?

Yes

No

Refused

Opinion Influencer

Yes

No

Tenure

Owned outright - without mortgage

Owned with a mortgage or loan

Rented from the council

Rented from a housing association

Rented from someone else

Rent free

Refused

What is the highest educational level that you have achieved to date?

No formal education

Primary

Secondary school, high school, 6th form/ college, GCSE's, A-Levels, BTEC, NVQ levels 1 to 3, etc.

University degree or equivalent professional qualification, NVQ level 4, etc.

Higher university degree, doctorate, MBA, NVQ level 5, etc.

Still in full time education

Don't know

Refused

Are you personally responsible for selecting half or more of the items to be bought from supermarkets and food shops?

Yes - responsible for half or more of the items bought

No - not responsible for most of the items bought

Refused

How many cars are there in your household?

No cars in the household

1

2

3+

Refused

To which of the following ethnic groups do you consider you belong?

White

Mixed

Asian

Black

Chinese

Other ethnic group

Refused

To which of the following religious groups do you consider yourself to be a member of?

Christian

Muslim

Hindu
Jewish
Sikh
Buddhist
Other
None
Refused

Which of the following best describes where you live?

Urban - Population over 10,000
Town and Fringe
Village
Hamlet & Isolated Dwelling
Refused

Which of the following best describes your current working status?

Working full time - working 30 hours per week or more
Working part time - working between 8 and 29 hours per week
Not working but seeking work or temporarily unemployed or sick
Not working and not seeking work/ student
Retired on a state pension only
Retired with a private pension
House person, housewife, househusband, etc.
Refused

Do you work in any of the following occupations?

A nationalised industry/state corporation
Central government or civil service (including Courts service and Bank of England)
Local government or council (including fire services, police and local authority controlled schools/colleges)
A university, or other grant funded establishment (include opted-out schools)
A health authority or NHS Trust
The armed forces
Other public sector occupation (Please specify as much detail as possible)
A charity, voluntary organisation or trust

Self-employed (Private sector)

None of the above/ I work in the Private sector

Refused

Which of the following ITV regions do you live in?

Anglia

Border

Central

Granada

London

Meridian

STV

Tyne Tees

Wales

West

Westcountry

Yorkshire

UTV

Refused

Marital Status

Single

Married

Civil Partnership

CoHabiting

Widowed

Separated

Divorced

Refused

Which of the following cities do you live in, or nearest to?

Glasgow

Edinburgh

Newcastle

Leeds

Hull

Sheffield

Manchester

Liverpool

Nottingham

Birmingham

Norwich

Milton Keynes

Brighton

Oxford

London

Southampton

Bristol

Plymouth

Cardiff

Belfast

Chelmsford

Preston

Dundee

Stoke-on-Trent

Swansea

None of these

What is the combined annual income of your household, prior to tax being deducted?

Up to 7,000

7,001 to 14,000

14,001 to 21,000

21,001 to 28,000

28,001 to 34,000

34,001 to 41,000

41,001 to 48,000

48,001 to 55,000

55,001 to 62,000

62,001 to 69,000

69,001 to 76,000

76,001 to 83,000

83,001 or more

Prefer not to answer

Don't know

Do you have a longstanding physical or mental condition or disability?

Yes - mental condition

Yes - physical condition

Yes - disability

Yes - other

No

Refused

Appendix B

Semi-Structured Video Interview Questions

Below is a list of the questions asked as part of the semi-structured video interviews.

Section 1

- Thinking about your home, how satisfied do you feel with it?
- Tell us about your home and who you share it with.
- For those who do not currently live with their adult children or elderly parents – are you considering/would you consider living together? Why/why not?
- Do you work from home? How often?
- Which spaces do you use? How is it setup?
- How long have you lived in your home?
- How long do you plan to continue living there? Why?
- How important is the neighbourhood/community in these considerations? (access to services; proximity to friends/family, etc.)

Section 2

- Can you talk me through a tour of your home? Walking in through the front door, what's the first place you come to?
- Is it open plan?
- Where do you most enjoy spending time in your home? Is this the same as where you spend the most time?
- Where do your spouse/children/roommates spend the most time?
- Where do you hang out and spend time together? What is it about these spaces that makes this work?
- What do you do together?
- Where do you eat, do you eat together?
- Do you feel that your home works for different kinds of socialising, with household members and house guests? Ask sub- questions.
 - Where do you hang out with visitors to your home?
 - Would you like to change your home so as to work better for socialising/hosting?
 - Where will these be and how would they look like?

- Do you feel that you have enough privacy within your home to be able to have personal space when you need it?
- How do the people you live with feel about this?
- Would you like to create more spaces of privacy? Where will these be and what would they look like?
- Are there sometimes conflicts between people trying to use the same space for different functions?
- How do you get around these problems?
- Do you have to spend a lot of time taking care of your home (like cleaning or changing light bulbs or fixing things)?
- Is this something that you would like to do less or more of?
- Which is your favourite window in your home? What can you see out of it?
- Thinking about what we've discussed, how you spend time eating, socialising, getting privacy and overcoming conflict, are there homes you know of, maybe those lived in by friends and family, that you see as serving the household occupants particularly well, or particularly poorly?

Section 3

For those embarking on transformation:

- What are you modifying and why?
- What do you hope to gain from this transformation?
- Why is it important to you and those you live with?
- How long do you expect the transformation to take?
- Why modify rather than move entirely? What would cause you to move rather than modify?
- Are there any specific areas that you foresee needing transformation in the future?

For those who have already done transformations:

- When did you complete your transformation? How long has it been since then?
- What did you modify and why?
- What made you improve your home and not move?
- How do you feel things have changed after renovation?
- Is there anything you wish you had known before renovating?
- Is there anywhere you wish you had spent more money on?

For both groups:

- One of the things we are looking at is the adaptability of homes to meet needs now and in the future. Is this something you have thought about?

Section 4

- On the whole, how happy are you with your home?
- Do you have a favourite place outside of your home? Can you tell me about this, what you like about it?
- To what extent do you see your home as a reflection of who you are? Why?
- What is your favourite element of your home?
- Are there any areas you share with your neighbours (shared garden, balcony)? What do you use it for?
- How far does your feeling of home stretch? Your street? Your neighbourhood? The town centre?