

Information & Systems

Full lab report on research question:

How can we organise, classify, categorize, curate and present the items around us?

Student:

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under supervision of

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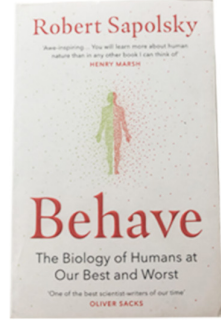
Properties: Fox

1. Form:



2. Soft toy

- 3. Never to be fed or walked
- 4. Made of corduroy fabric
- 5. Colour: Orange, black, and beige
- 6. Holds sentimental value
- 7. Stuffed with weighed beans
- 8. Embroidered facial features
- 9. Weight: 124 g.
- 10. Dimensions: 33 x 22.9 x 15.2 cm
- 11. Made for ages 6 months +
- 12. Texture:



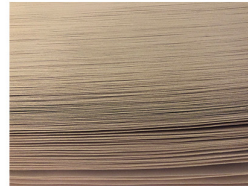
Properties: Book

1. Form: rectangular



- 2. 800 pages in total
- 3. Cost £9
- 4. Embossed cover

- 5. Paperback book
- 6. About human nature
- 7. New York Times Best Seller
- 8. Weight: 599 g.
- 9. Dimensions: 12.9 x 4 x 19.8 cm
- 10. One of my favorite books
- 11. Colours: Red & green.
- 12. Texture:



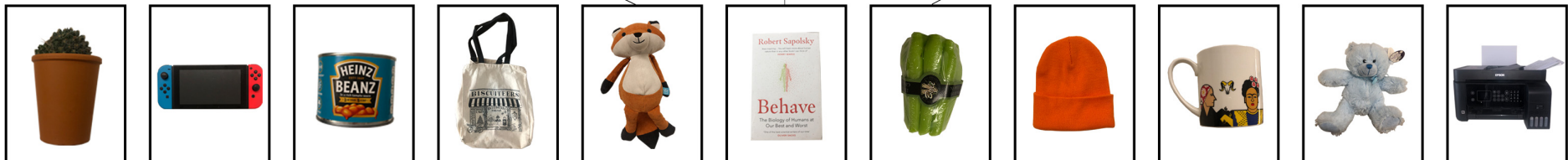
Properties: Soap

1. Form:



2. The smell reminds me of home

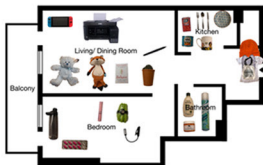
- 3. Lemongrass scented
- 4. Calming aroma
- 5. Colour: Green
- 6. Smooth to the touch
- 7. In its plastic because I refuse to open it.
- 8. Dimensions: 8 x 5 x 2.5 cm
- 9. Weight: 45.4 g.
- 10. Carved into the shape of a lemongrass
- 11. Purchased in Bali
- 12. Texture:





[Click here to watch video.](#)

Day 1



Day 2



Day 3



Day 4



Day 5



Day 6



Day 7



“Usage Pattern Aggregation”

x-axis : Shows how often the item is used
 - its US (Usage Score)

$$US = \log\left(\frac{t_{actively_used}}{t_{total}}\right)$$

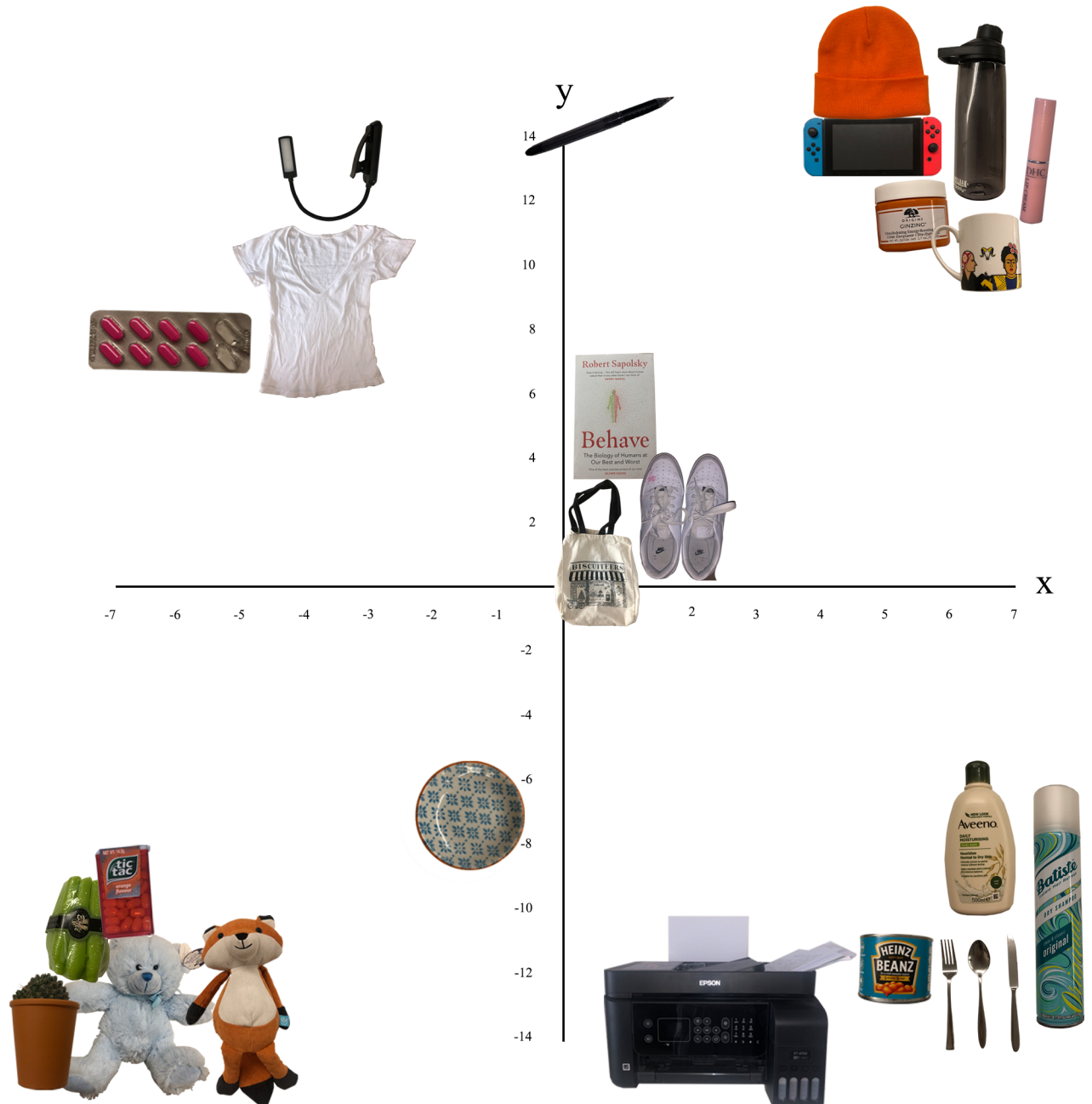
y-axis : Shows how much the item moves
 - its LVS (Location Variance Score)

$$LVS = \log\left(\frac{t_{static}}{t_{total}}\right)$$

Description: Categorized by usage, by how often i use these items and how much they move. Some items have a place where they “live” and some are used so often that they “live” wherever i go. This category emerges naturally by my usage pattern.

Outcome:

- Bottom right* - classified as the “hoarder” corner.
- Bottom left* - necessities, items used most often and must have a place in my life.
- Top right* - the top left corner is split into two categories. The edge, and the centre.
 - The edge* - My favourite items, they essentially go wherever i go so they are easily lost but always eventually found.
 - The centre* - Current Favorites. Items that are used a lot in a short period of time.
- Top left* - “The ghosts” Items that I forget even exist but somehow will never stay in one location, dont have a place to “live.”



Item Name	US	LVS
Tic-tac	-7.0	-9.2
Lip balm	7.0	13.0
Tote bag	0.9	0.3
White sneakers	1.7	2.2
Printer	2.5	-13.0
T-shirt	-4.0	8.7
Beanie	4.8	15.3
Mug	6.5	9.7
Book	0.8	5.0
Reading light	-4.0	12.4
Soap	-7.6	-11.8
Fox toy	-5.1	-14.0
Sauce plate	-1.5	-7.0
Shower gel	6.4	-8.5
Dry shampoo	7.8	-11.0
Moisturizer	5.0	11.3
Pen	1.0	14.6
Cactus	-8.6	-14.3
Panadol	-6.3	7.9
Water bottle	6.5	14.0
Can of beans	5.3	-12.1
Bear toy	-7.0	-14.0
Spoon	6.1	-12.6
Fork	5.3	-12.6
Knife	6.9	-12.6
Nintendo switch	4.9	13.3

Fig. 1 - Data used for the graph.

Conclusion: The whole point of this project is to categorise the items in my house to better understand how I live. To approach this problem, I started with 3 items and deeply explored their properties; how I use them, colour, texture, dimensions, etc. However, seeing that I have 26 items to explore, I realised that it is not feasible to explore all the items with such granularity. Therefore, I chose to focus on a single property, for me the most interesting - movement and location of the items throughout the day. The most natural way to display this property was via an animation/video of where the items are moving throughout the day. Movement information for a single day allows us to answer very specific questions such as: “Which items are used together?” “When are the items used trough out the day?”. Although these questions are interesting there are a lot of variation on a day to day basis. In order to draw general conclusions, we have to look at videos of multiple days. Having movement and usage data for multiple we have to further reduce the amount the information we this time I decided to drop the specific location information and only keep how much items are moving and how much I am using them during the day. This naturally leads to representing the information in a graph form. From the graph, you can cluster these items and create categories.

During this experiment, I touched on many of the LATCH categories. We have classified by Location and Time via the animation. By extracting location and usage data from the animation needed to list every item - Alphabet. The graph itself showed distinct categories of items. Lastly project itself shows signs of hierarchical organisation but instead of organising the items we organised the information about the items.