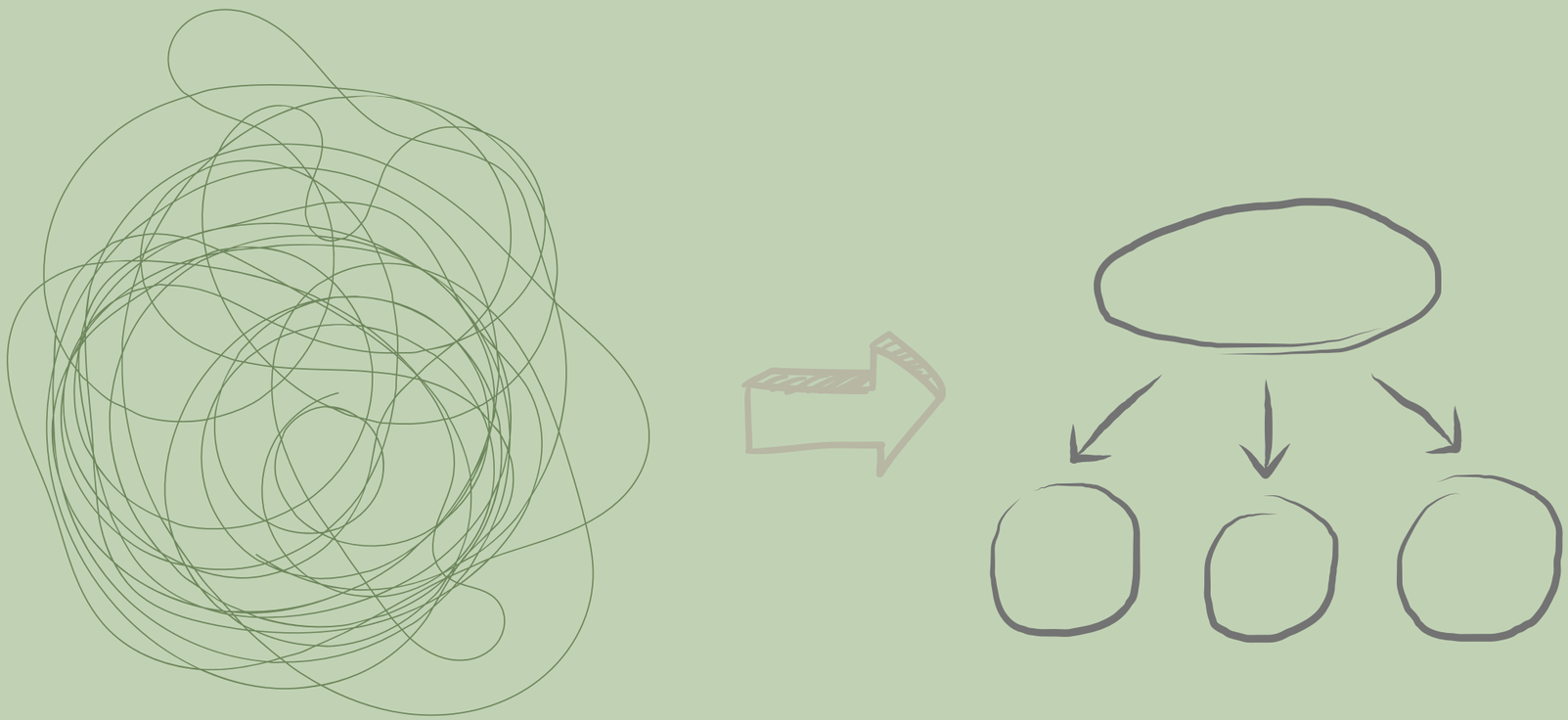

# Concept & mind mapping for creative reporting

Bishwajit Ghose

Concept & mind mapping for creative reporting



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"Drawing takes time. A line has time in it."

David Hockney

Researcher of social epidemiology with a keen interest in deep learning and computational linguistics. My favourite research methods include quantitative and big data analytics e.g. processing unstructured data using sentiment analysis, network analysis, and topic modelling techniques. I also teach and give workshops about the application of AI technologies in text processing and data visualization.


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# MOTIVATION BEHIND THIS BOOK

Design is a key element in creating anything valuable- whether a book cover or a kitchen towel. Taking a concept and converting it into something useful and visually appealing is a common goal of today's business leaders. And the same applies to the scientific community as aesthetics is a key attribute of knowledge communication.

Design has the power to change the way we express science efficiently and minimally as this is how our mental creativity best translates into physicality. As a huge fan of efficiency and minimalism, I constantly look for creative ways to make scientific storytelling as succinct and aesthetically appealing as possible for effortless consumption of knowledge, and also look for opportunities to share ideas that can be useful for the research community.

# WHY THIS BOOK

For most us, the brain understands visuals faster than it understands words. When we start listing keywords around certain topics, we essentially form blocks of concepts that fall under a given theme. As the volume of words increase, the blocks start to look out of place, and as a result, keeping track of the core concepts become harder, particularly for long and complex texts.

A swift remedy to this is the use of pictorial presentation of the ideas, which makes the assimilation of information more spontaneous and effortless than words. This book teaches the basic steps to making concept and mind maps with several real-life examples. The contents and diagrams can greatly benefit educators and learners whose work involves presenting complex ideas for non-technical readers.

*"People remember only 20% of what they read, but 80% of what they see"*

Reading is a lost art, according to many. And to the regret of most, we are not hard-wired for reading and writing, or at least to the extent we are hard-wired for speaking. To make things worse, about 15-20 percent of the general population is claimed to have dyslexia and dysgraphia (neurodevelopmental disorders marked by reading and writing disorders, respectively) for whom reading long and information-dense text can be extremely stressful in addition to being perplexing. Many researchers recommend the idea of reviving the old art of pictographs to inform the challenged, insufficiently literate and the busy readers.

Graphical representation of information not only increases the level of communication, but also enhances learning comprehension, and spurs creative thinking by stimulating different areas of the brain. Although there is substantial evidence that strings of words themselves are processed as images by our brain, deciphering texts to reach the subtexts including hierarchies, mechanisms, processes, pathways, timelines can be more toiling as well.

# WHO THIS BOOK IS FOR

Anyone whose work involves exploring simple networks, structures, and links among words or topics in a corpus of text but lacks the program skills to do so using natural language processing techniques. Those interested in educational content creation for clients with limited literacy, community presentations, and academic publishing will also find the diagrams to be particularly useful.

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# MIND MAPPING

Mind mapping is a brainstorming tool and diagramming technique originally developed by Tony Buzan in the 1970s. The technique can be used as an effective tool to improve critical thinking skills, as well as help researchers generate new ideas and recommend solutions on almost any topic. It’s an intelligent tool to organize thoughts and information into an easy-to-understand format.

Mind maps are a way to represent related ideas with symbols better than with complicated words: the mind forms associations immediately and through the map it represents them quickly.

Mental maps are usually valued as a revolutionary system for organizing ideas, since it is a graphic resource that integrates the use of both hemispheres, allowing the individual a greater capacity for understanding, learning and memorization. That is why it is considered the technique that best adapts to the way the brain works, thus achieving greater intellectual performance and a higher level of understanding. In this sense, the mental map becomes a powerful graphic technique that facilitates the use of brain potential.

# Using mind maps effectively

Create space on each branch or bubble so that you can add more ideas

Put related branches together and label them

Use arrows or lines to show connections between branches or bubbles

Don’t be afraid to experiment

USING MIND MAPS EFFECTIVELY

Add colors, pictures, or other visuals as needed

Write down any additional questions that come up while brainstorming

Take breaks from brainstorming and let your brain rest.

Sketch out several different kinds of mind maps before settling on one

# MIND MAPPING CAN ENHANCE MEMORY

When we create a mind map, we are essentially creating a visual representation of information. This can help us better remember the information, as our brain is better able to process visuals than text. Additionally, by including keywords and concepts in the mind map, we can more easily recall the information when we need it. Another great way to use a mind map is to take notes while reading or listening. This enables us to review the thoughts on the subject later, making it easier for us to recall what we read or heard if someone asks about it.

One other benefit to using a mind map is that we have all of the important points right there in front of us. It can also provide an outline for writing reports and other tasks that require organization. For example, if we want to write a scientific paper, one method would be to start with the intro paragraph on one page then move onto each point separately. As each point is completed, move onto the next point until they are all complete. In this way, we can know how many pages should go before moving onto the next topic.

# Some popular medicinal plants

Fenugreek

Aloe Vera

Thyme

Tulsi

**Medicinal plants**

Peppermint

Gotu Kola

Basil

Rosemary

Lavender

Sage

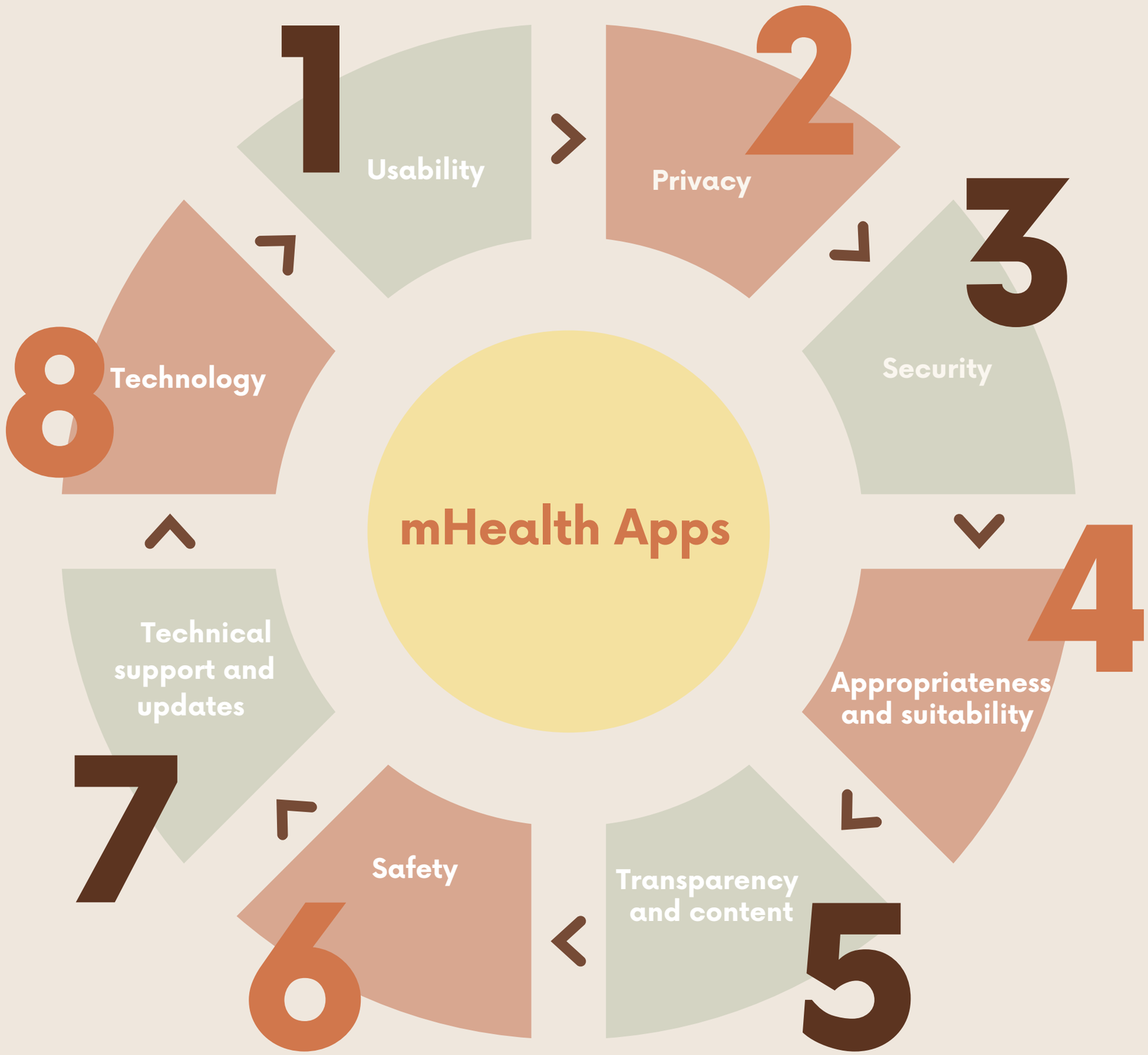
# MIND MAPPING FOR BRAINSTORMING

As mind mapping is a technique that involves creating a visual representation of thoughts and ideas, it can help paint the big picture and find new connections between them. In effect, mind mapping aids in better organizing thoughts and remembering information more effectively.

Mind mapping helps see the big picture and identify relationships between ideas. Plus, it forces organizing the thoughts in a logical way.

To use this technique, all we need to do is write down everything we know about a topic on text blocks or sticky notes. Then place them around an empty circle or other suitable shapes and in the order or pattern that makes most sense. This is done by adding keywords at the center and then branching out from there. Soon, there appears a map of all the thoughts! It's quite simple once we get started. And, because it's on separate blocks and not just in your head, it will be easier to think critically about the topics involved.

# Standard requirements for mHealth Apps




Pere et al

# MIND MAPPING FOR ORGANIZING PROCESSES

Mind mapping is particularly effective for organizing and understanding complex processes such as the evaluation of a new intervention in healthcare. Thus, it can be a great tool for creating ideas around a certain intervention and presenting the output as project reports or manuscripts. Mind mapping can also spur new ideas relevant to the existing sections or aspects of intervention e.g. potential benefits or side-effects that were not studied originally when designing or deploying the intervention.

# SWOT analysis of Robot-assisted surgery


Girdhar et al

# GUIDELINES FOR WRITING JOURNAL ARTICLES

## Title

Must reflect the theme and type of the study

## Abstract

Must contain a short description of the objectives, methods, results and conclusion of the study

## Introduction

Contain a detailed description of the issue at hand, existing evidence, literature gap, and rational of the study.

## Methods

A point-by-point description of data collection/evidence synthesis methods, definition of the key variables/concepts, steps used in the analysis,  sensitivity analysis.

## Results

The outcome of the study, consists of the summary table of the sample profile, analysis/review of the intervention. (e.g. exercise reduces the risk of heart diseases)

## Discussion

A detailed description of the results by providing the underlying mechanisms e.g. how exercise reduces the risk of heart diseases, comparison with previous studies, and strengths and limitations of the study.

## Conclusion

Must include a brief and concrete summary of what was done, a critical summary of the findings, and take-home messages.

## References

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# WHEN TO USE CONCEPT MAPS

Concept maps are great for organizing information and brainstorming new ideas. They can help you see relationships between concepts, and how those relationships change over time. They're also a helpful tool for studying, since you can create a map of key information to help you remember key points. One thing that distinguishes concept mapping from mind mapping is that it has arrows connecting one idea to another, which shows causal relationships. It also usually includes pictures or illustrations with the text so readers get a visual representation of what they're reading about. That's not true for mind maps because you're only supposed to include keywords on branches. That makes sense because when people use concept maps, they don't need words to convey meaning--they just need images. That's why it may be difficult for someone who isn't used to concept mapping in their field to understand them if there aren't any words involved.

# MIND VS CONCEPT MAPS

Mind mapping and concept mapping are two popular tools for visualizing information. Both involve creating a diagram with nodes representing ideas or concepts, but there are some key differences. One difference is that mind maps usually start with a circular or radial structure, whereas concept maps start with a branched structure with more complex and interconnected ideas presented in a hierarchical format. Mind maps are relatively simpler and faster to draw as the secondary ideas can be arranged around the central idea one after another. For concept mapping, the secondary ideas further branch out in a logical manner by respective the causal relationship along the lines, and hence requires more critical thinking.

# STEPS IN CONCEPT MAPPING: AN EXAMPLE

Let's have a look at the following text:

> **Global warming is linked with higher frequency of natural disasters such as floods, drought and cyclones, which in turn affect agricultural and food security, creating a chain of social problems such as poverty, inequality and unemployment, which ultimately lead to higher crime rates and disrupt social resilience. Experts also suggest that urgent action on reversing the effects of climate is necessary to protect the health of the forest ecosystems. The warming climate weakens natural controls on insect populations and accelerates their rates of growth and reproduction. FAO estimates that annually up to 40 percent of global crop production is lost to pests**

A nicely laid out description of how global warming can have such far-reaching impacts on the society and environment. Still, the interconnection between the problems and their underlying causes are hard to picture.

Now let's decode the text to extract the key ideas:

Unemployment

Inequality

Resilience

Flood

Water security

Natural disasters

Ecosystem

Agriculture

Drought

Global warming

Forests

Poverty

Crop production

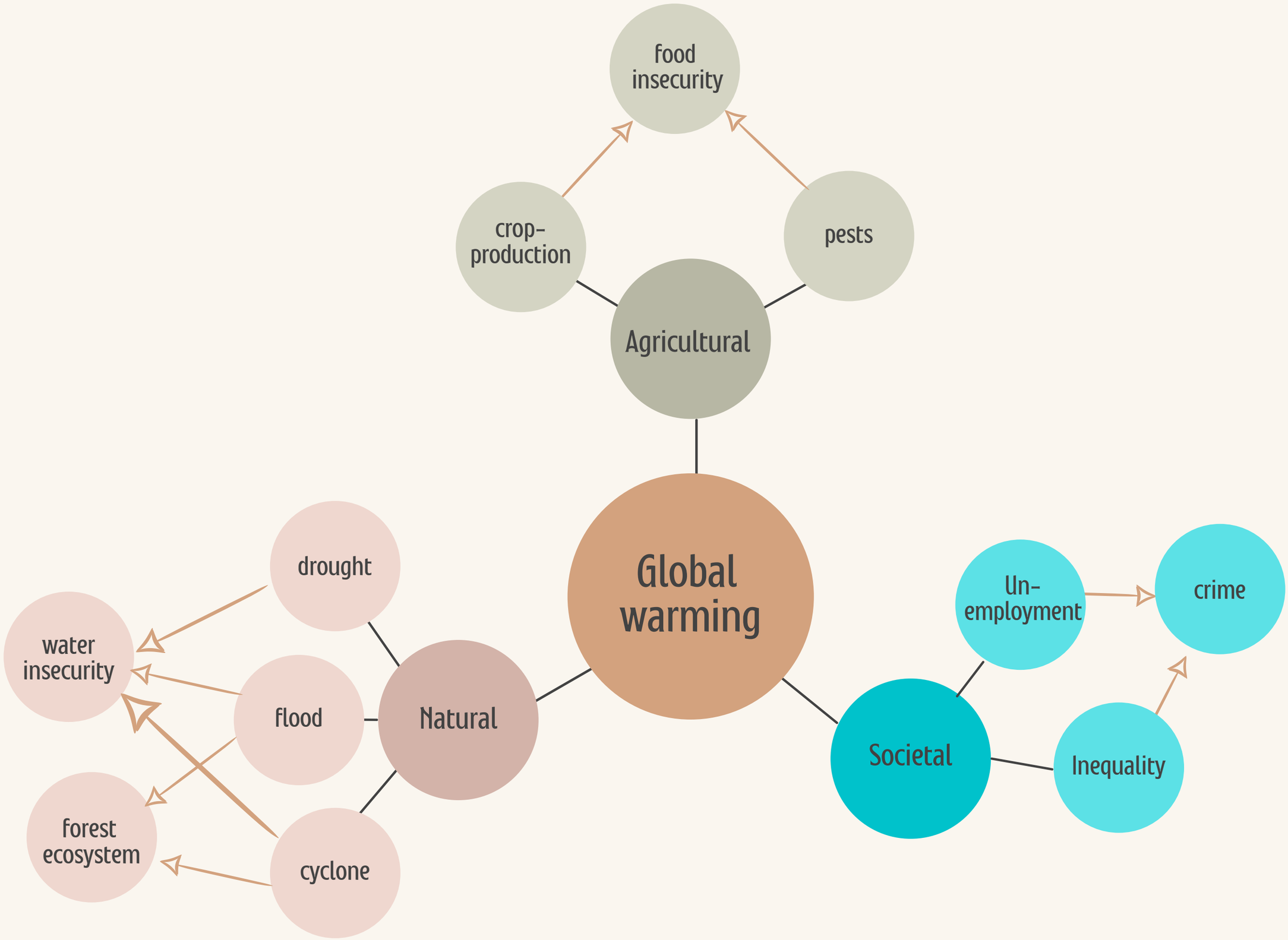
Food security

Crime

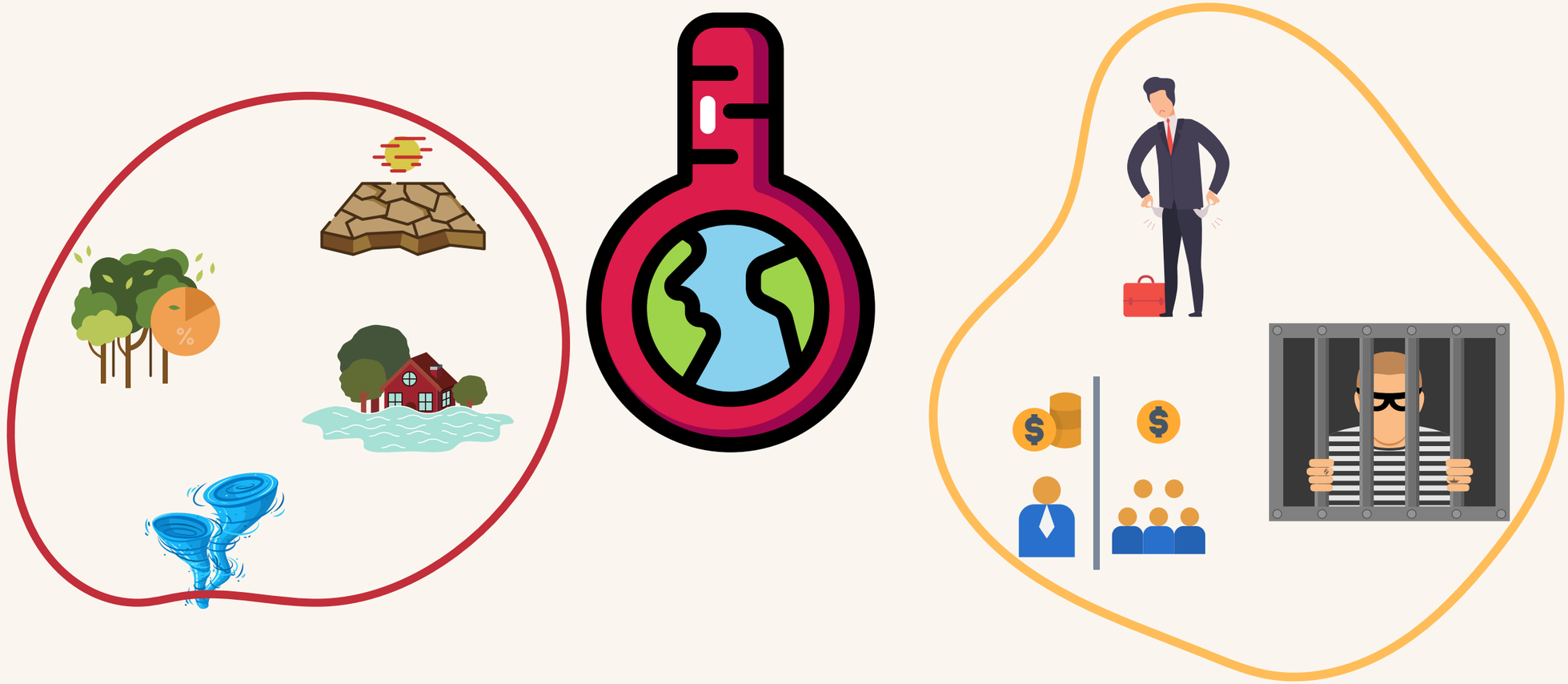
Cyclone

Peste infestation

And connect them the way they were mapped in the text:

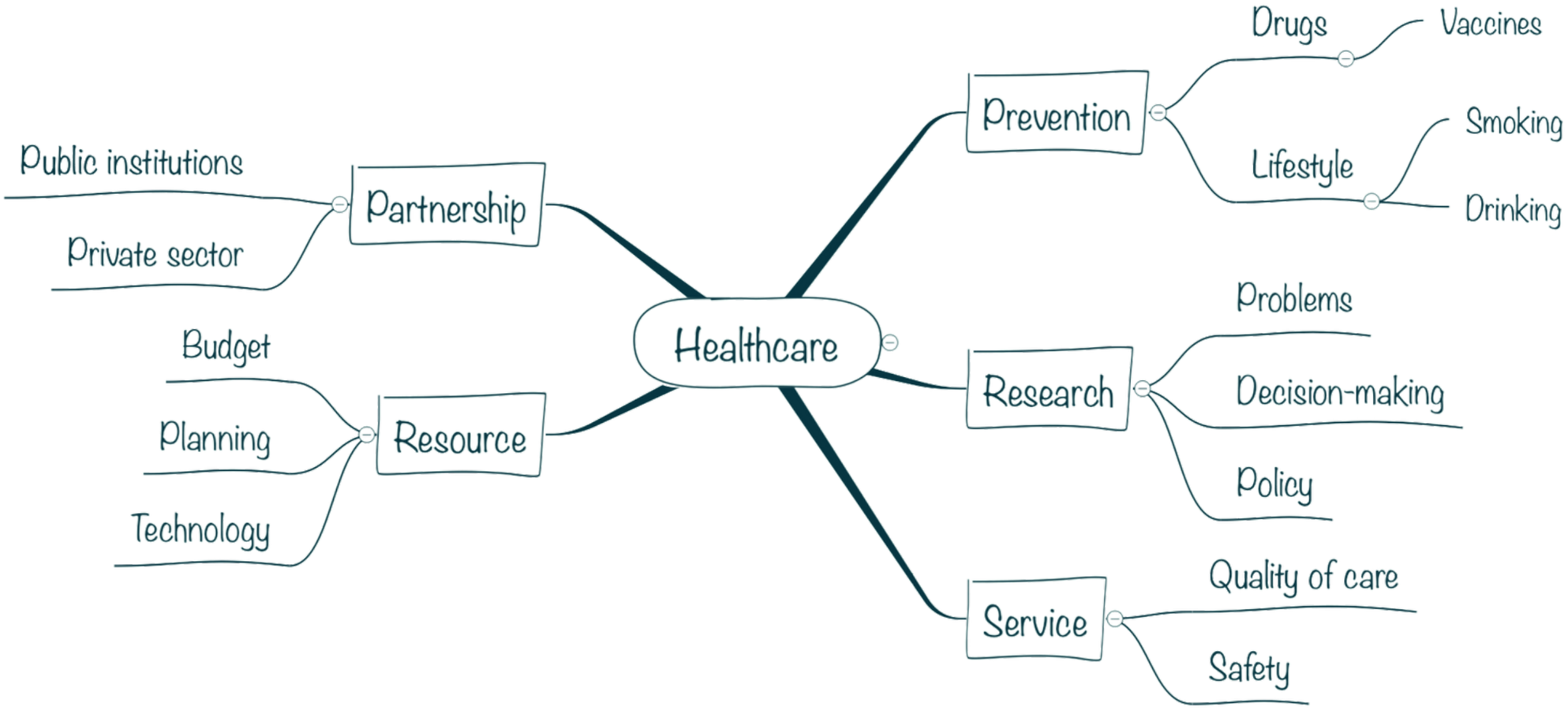


# A simpler and pictorial alternative



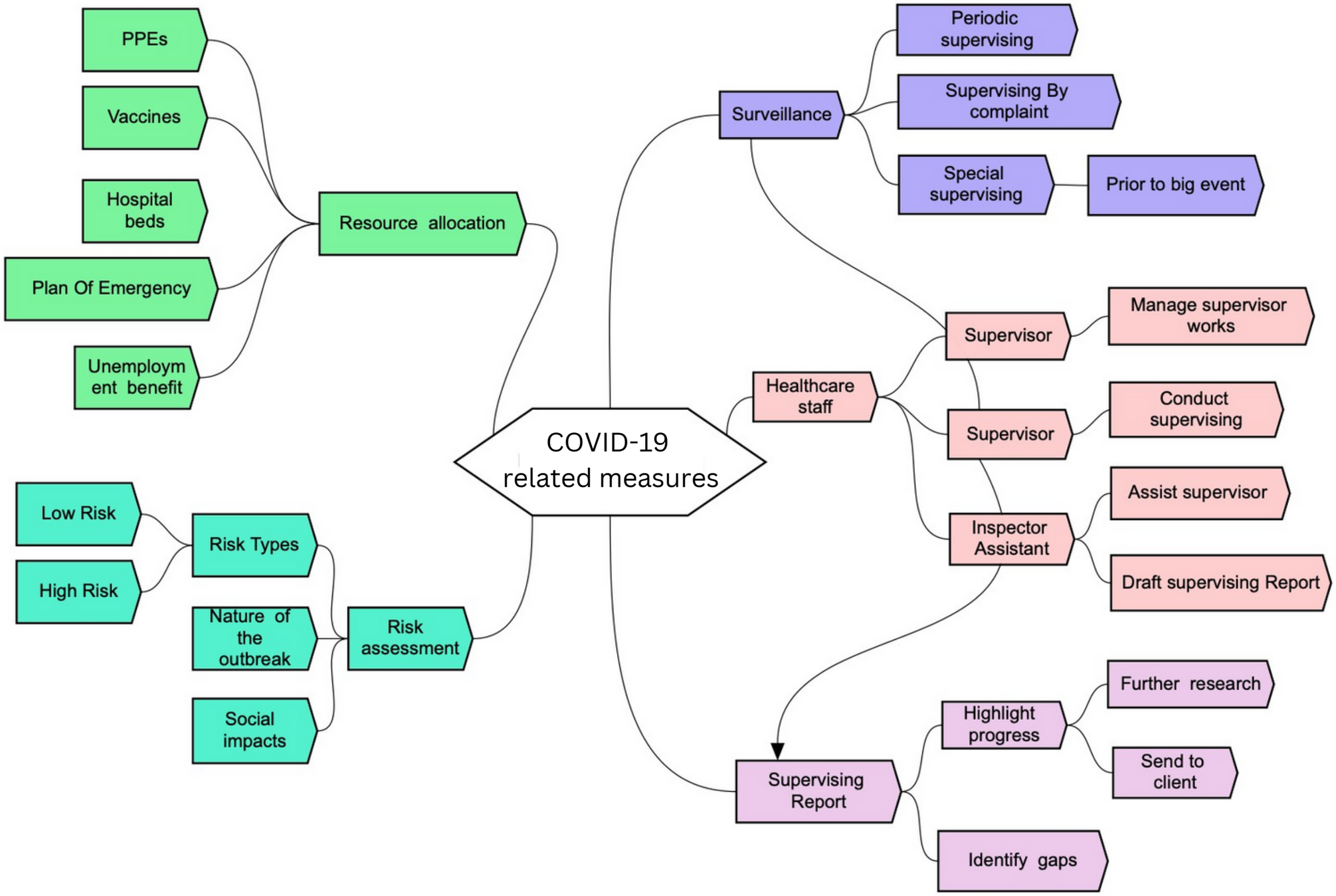
# Factors linked with mental health outcomes

# Components of a healthcare system

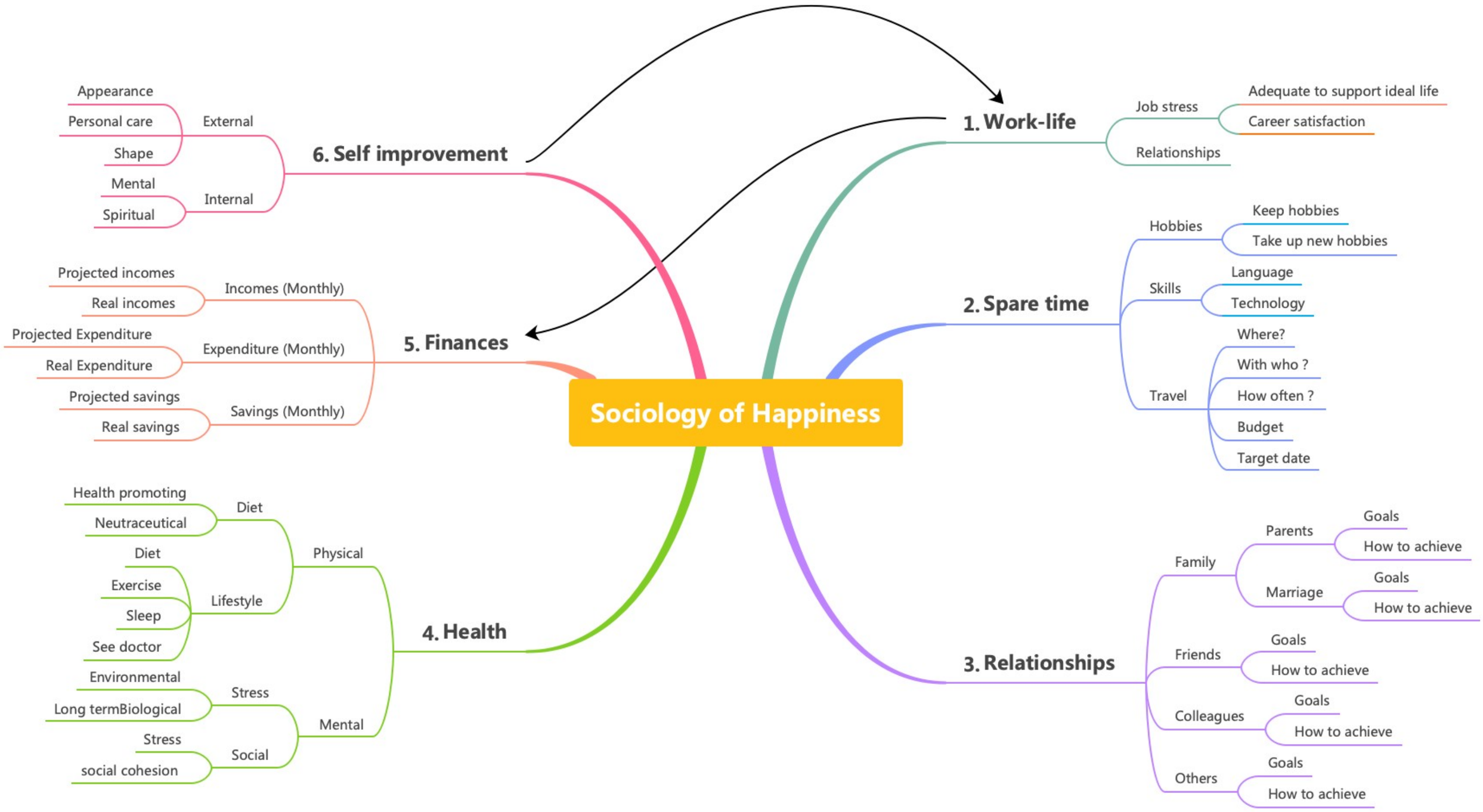


# 6 ways to restore forests

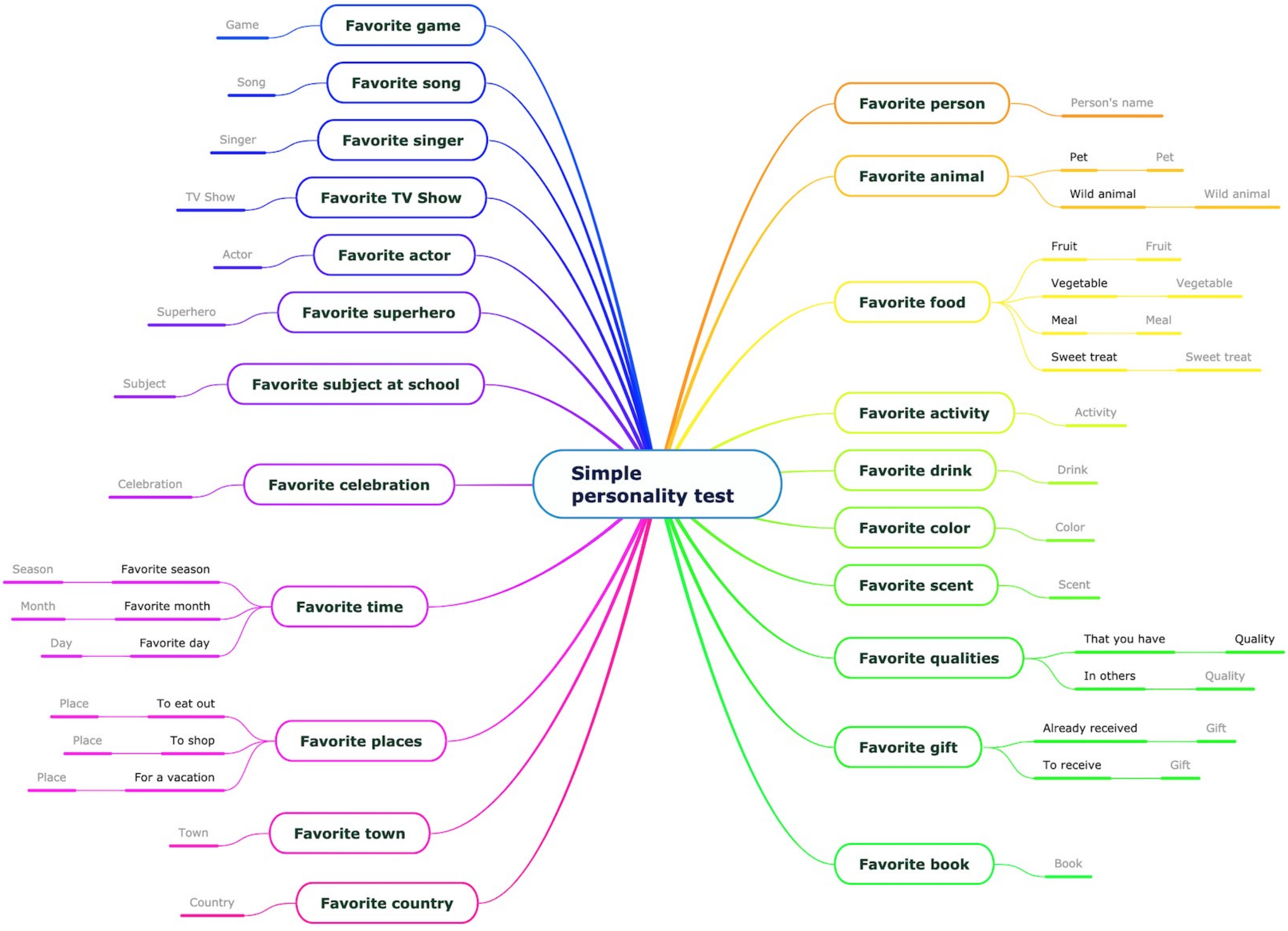
# Strategies to handle a pandemic



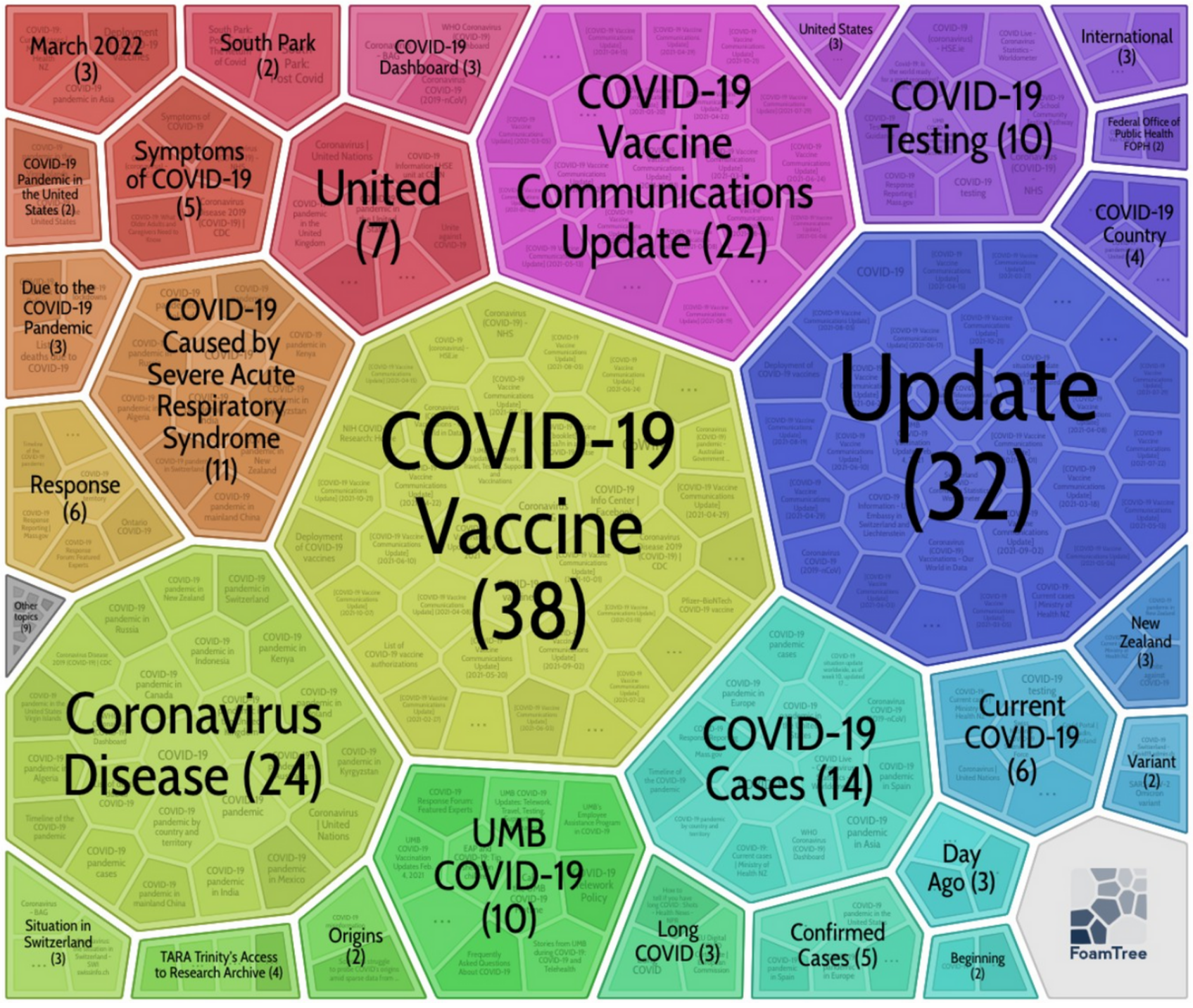
# Sociology of Happiness



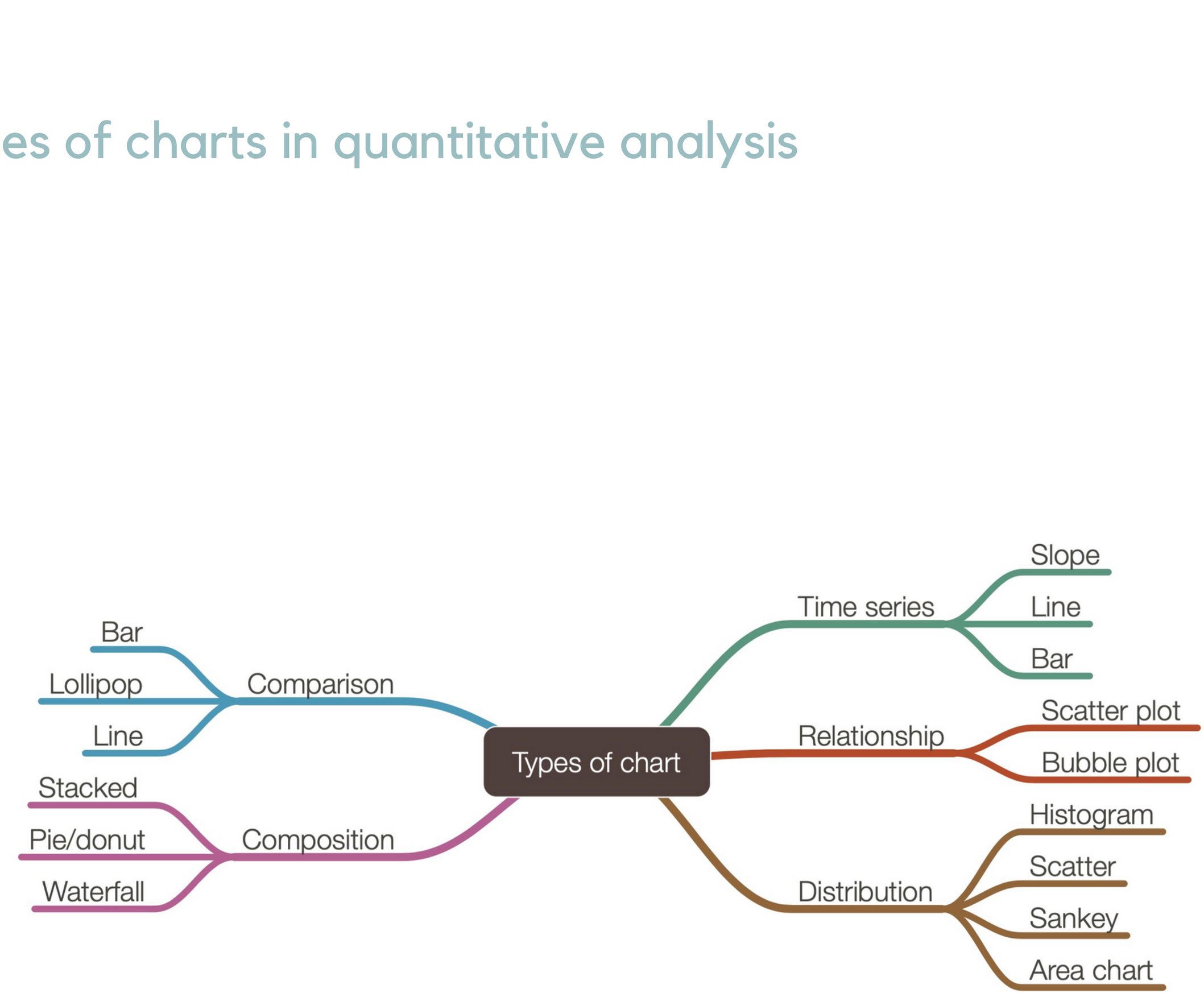
# Domains of a simple personality test



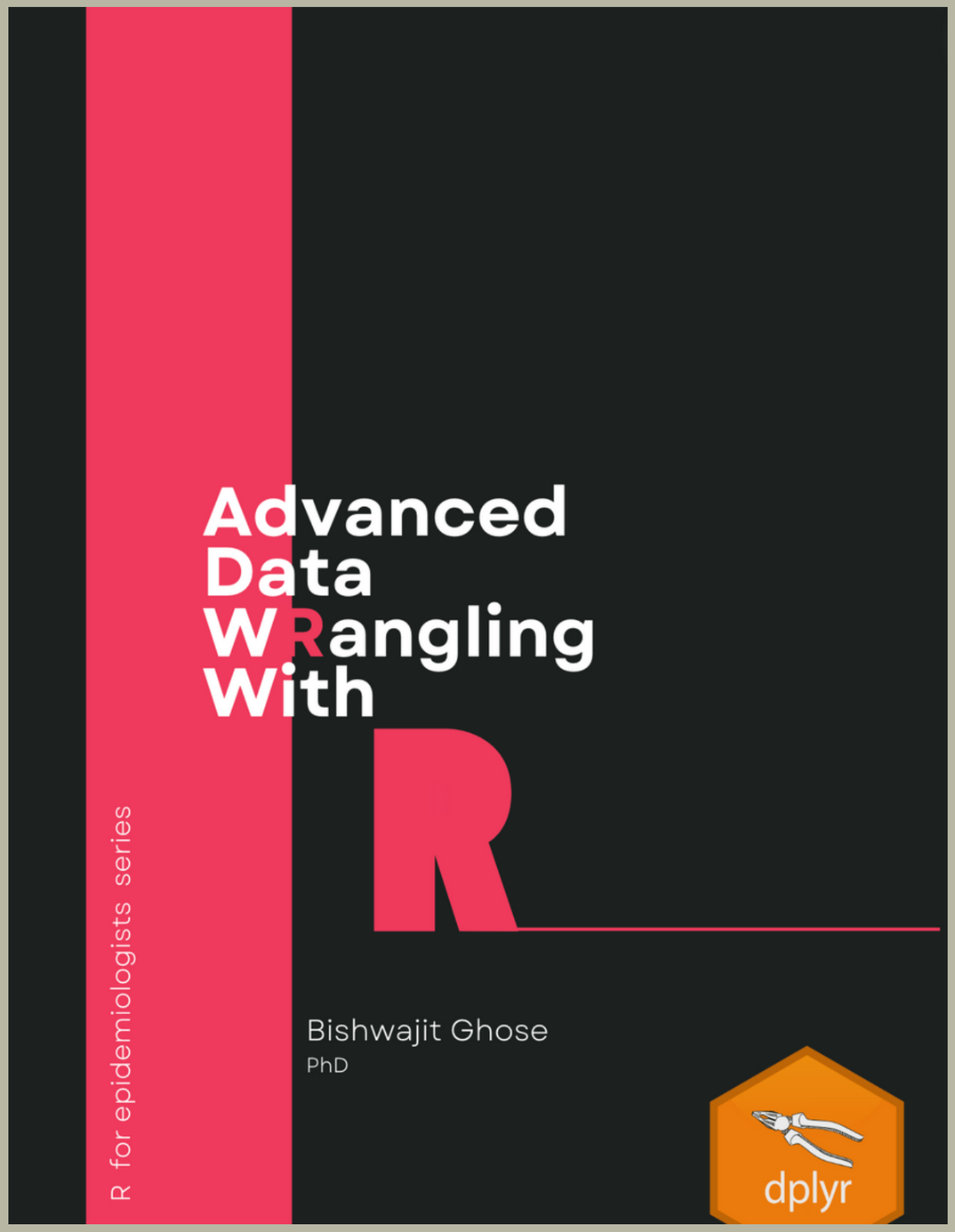
# Hierarchical clustering of key words



# Types of charts in quantitative analysis



# Upcoming books by the same author

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