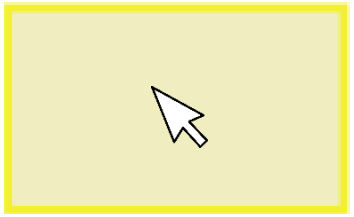
In this study, we are asking you to use a tool called *Cognitive-Affective Map* to depict your thoughts, feelings and assessments regarding your attitude towards an emerging technology, which you will be informed about shortly. The following instructions will help you to understand how to use this tool.

Example farmers' market:

Julia regularly shops at the farmers' market and has many different thoughts and impressions about farmers' markets versus alternative grocery stores.

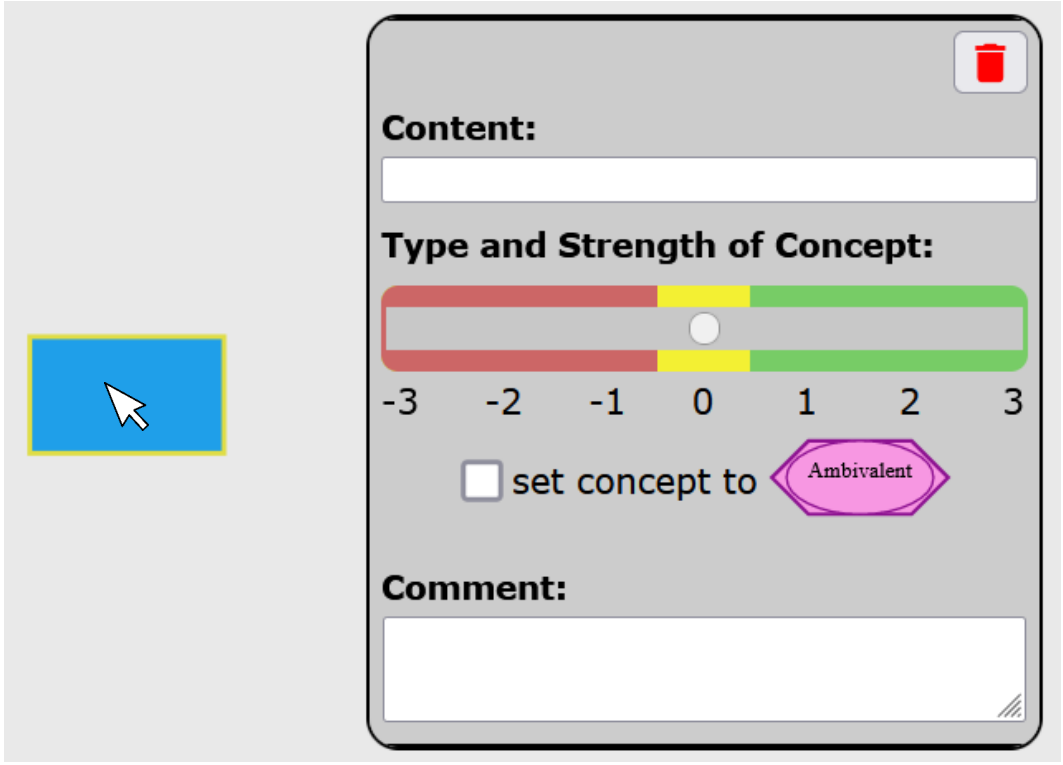
Using the mind-mapping tool, Julia is able to draw the impressions and thoughts she has about "shopping at the farmers' market". She is also able to evaluate and link her written impressions with each other.

To add ideas, she simply clicks on the white background of the C.A.M.E.L. software



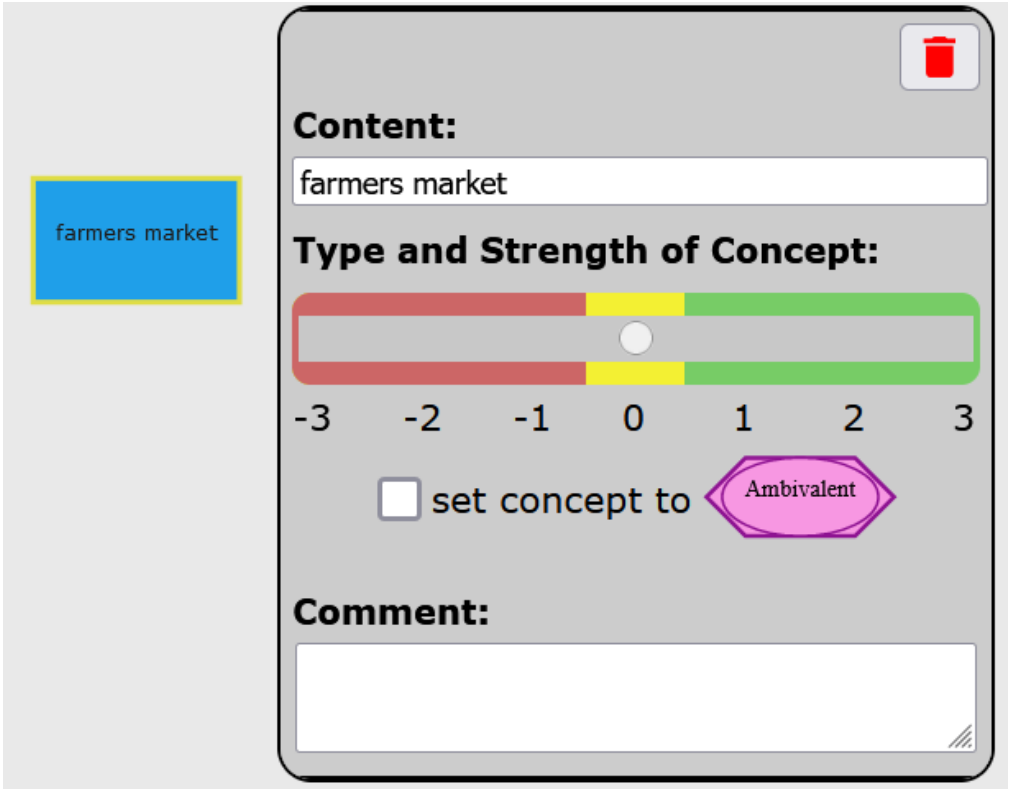
A yellow box will appear.
By clicking again on a free space on the white background, Julia can add more concepts.

To change ideas, Julia double clicks on the drawn concept.

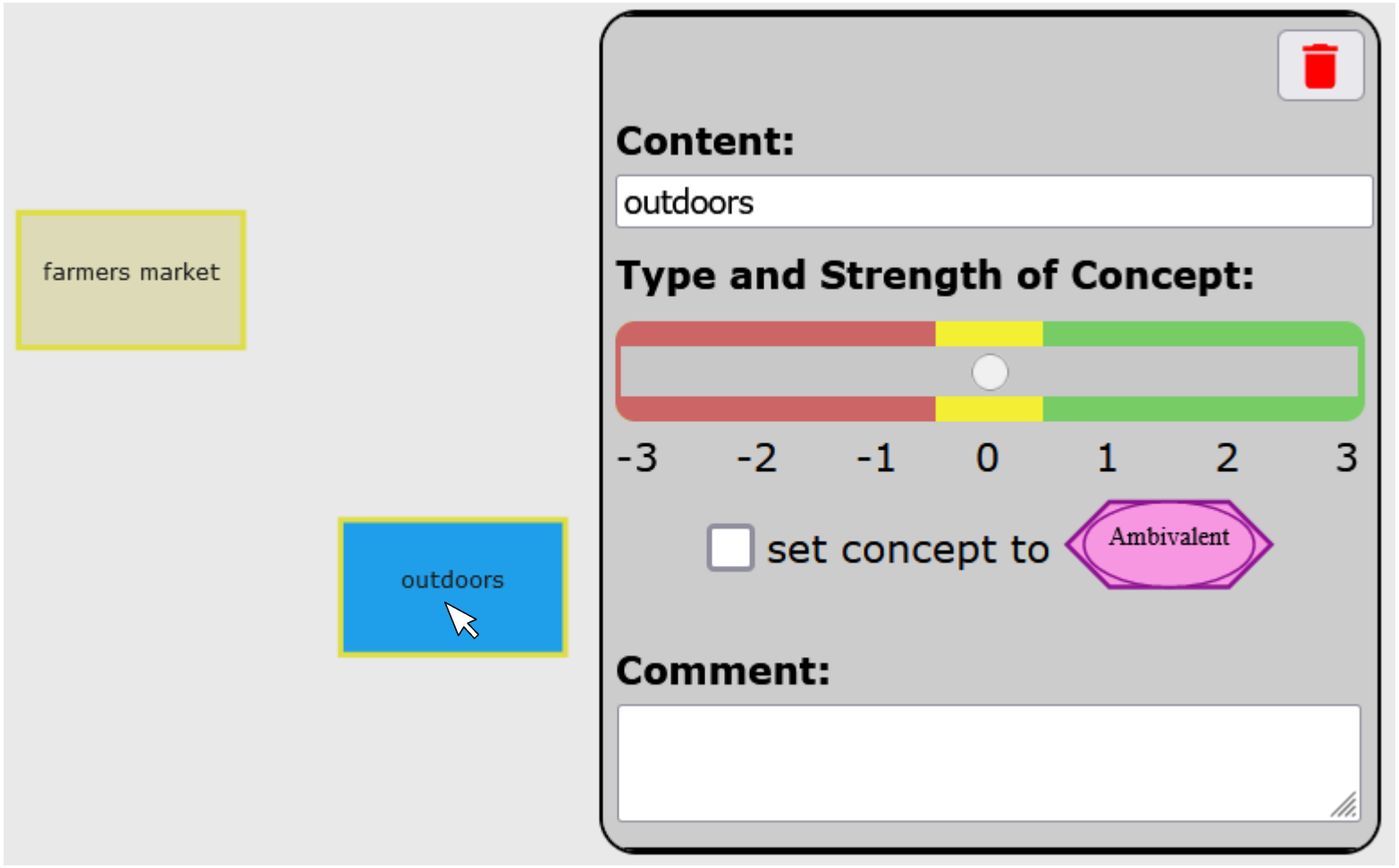


A dialogue window pops up. Here you can change the content, type and strength of the concept and add a comment.

Julia changed the **content** of the concept to “farmers’ market” by simply writing within the content field:

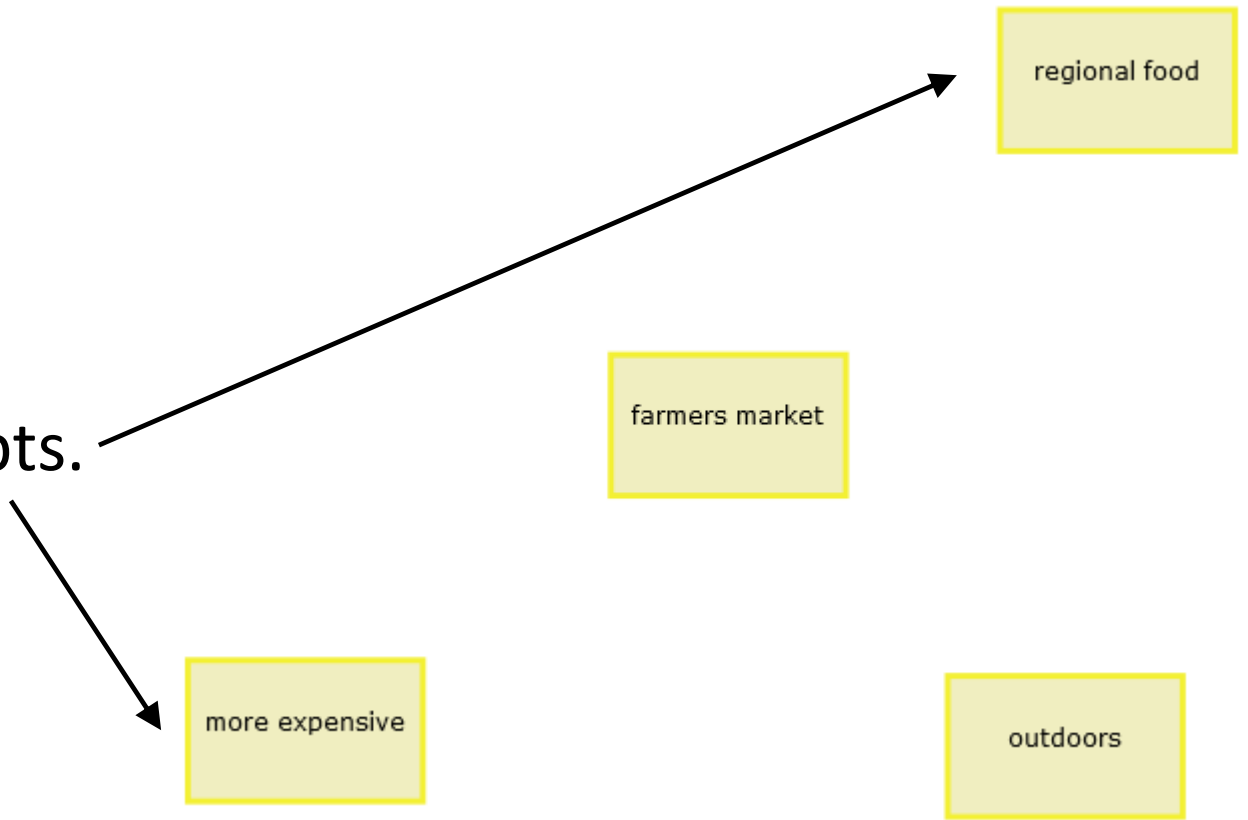


Julia can now include other concepts that are important to her decision to shop at the farmers’ market.



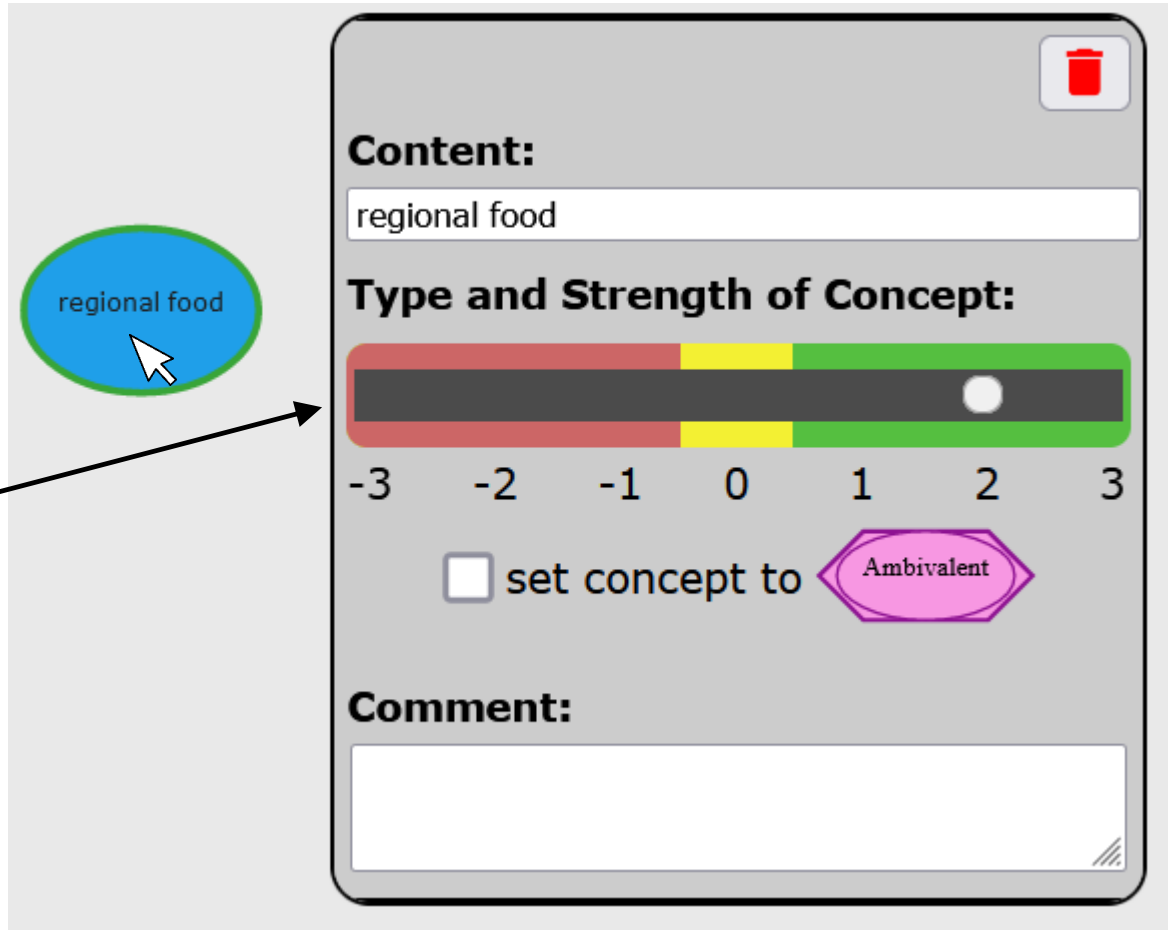
Next, she notes that the farmers' market takes place outdoors

Julia adds two more concepts.



Yellow squares represent concepts that are neutral.

However, concepts can be positive, negative, neutral, or ambivalent.
Double-click a concept and using the slider to adjust the emotion towards the concept



Julia feels positive about “regional food”.

Positive concepts are represented by green ovals.

The concept turns green when the slide bar is moved further to the right.

Slightly positive

Intermediate positive

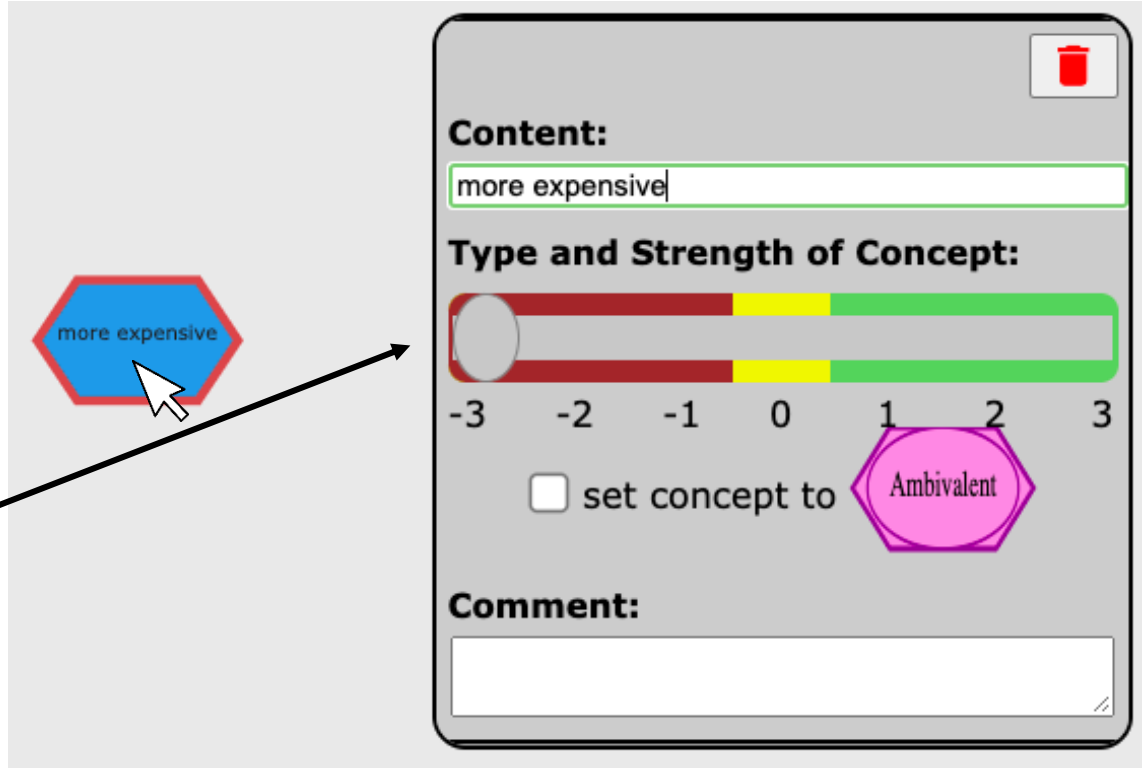
Very positive

The slide bar offers **three strengths** for positive evaluation.

The thicker the border, the more positive the concept weighs!

Julia does not like that the food is more expensive than at the supermarket. Negative concepts are represented in the shape of a red hexagon. For negative concepts, the same logic applies as for the positive concepts.

Julia chooses “-3” to indicate that this point is very negative for her.



Julia feels negative about “more expensive”.

Negative concepts are represented by red hexagons.

The concept turns more reddish when the slide bar is moved further to the left.

Slightly negative

Intermediate negative

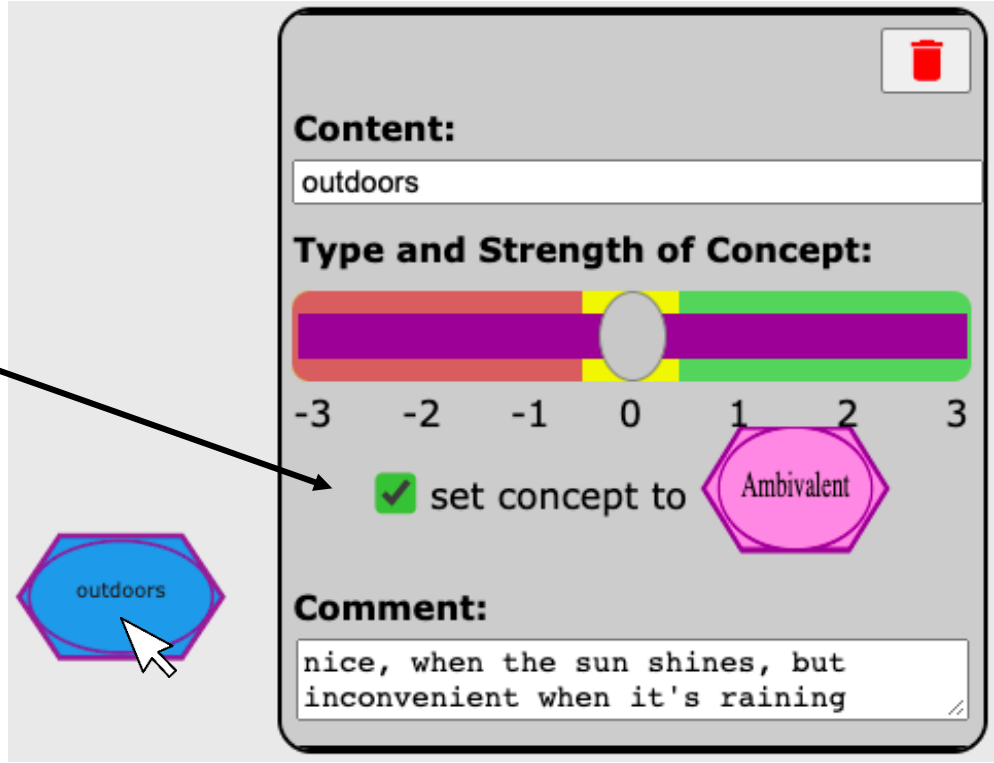
Very negative

The slide bar offers **three strengths** for negative evaluation.

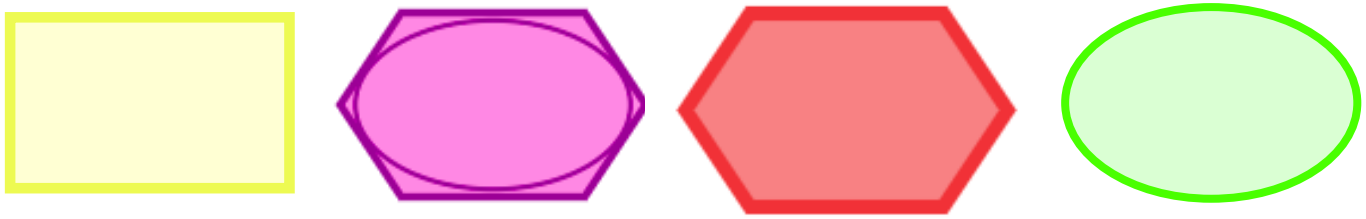
The thicker the border, the more negative the concept weighs!

Julia is ambivalent about the fact that the farmers' market is "outdoors". Ambivalent indicates that Julia has mixed, meaning both positive and negative, feelings about it.

To indicate ambivalence, Julia clicks the box under the slider. Ambivalences are shown as superimposed violet ovals and hexagons.

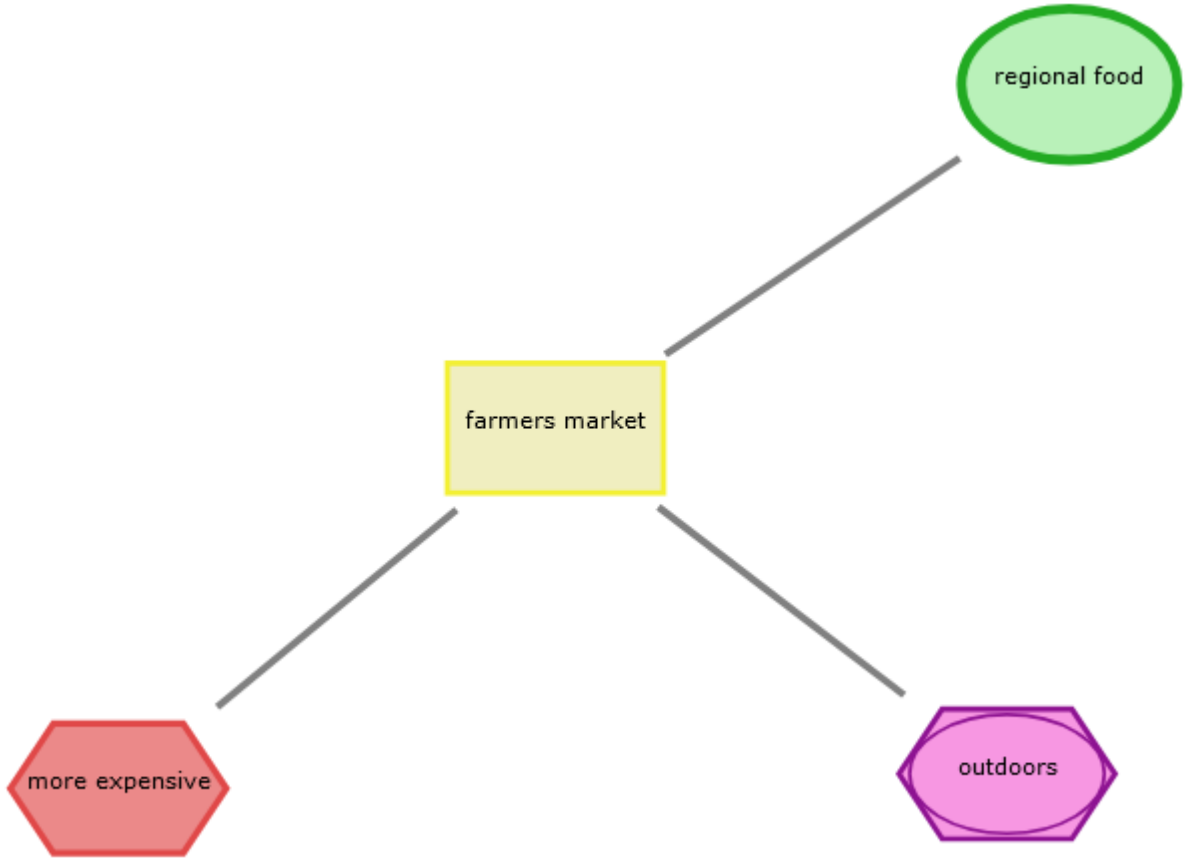


Below you can see all colors, shapes and their meanings.
The thicker the border (for green and red), the more intense the feeling.

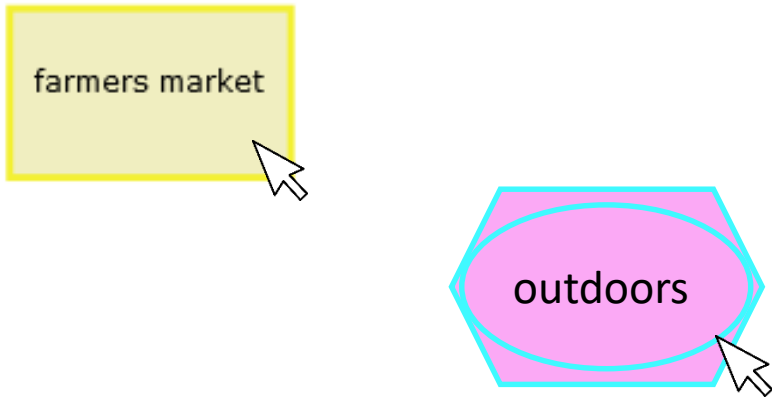


neutral ambivalent negative positive

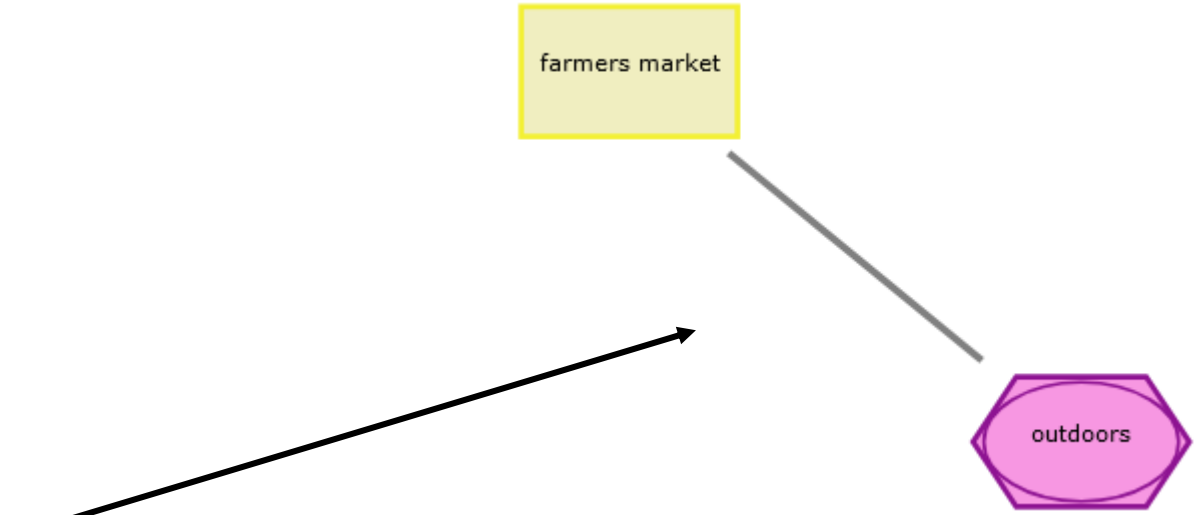
Next, Julia wants to relate concepts with each other.



To connect two concepts, Julia must single-click on both.

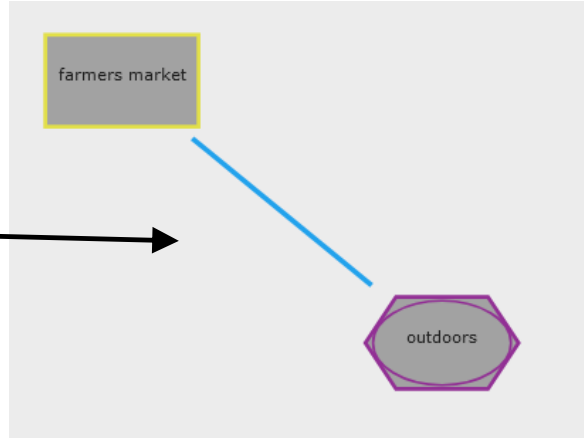


Single-clicking a concept will highlight the border in blue.



Single-clicking on the second concept will lead to a connection appearing between the two concepts.

Let´s look at the different connector options.
If Julia double-clicks the link, the menu appears.

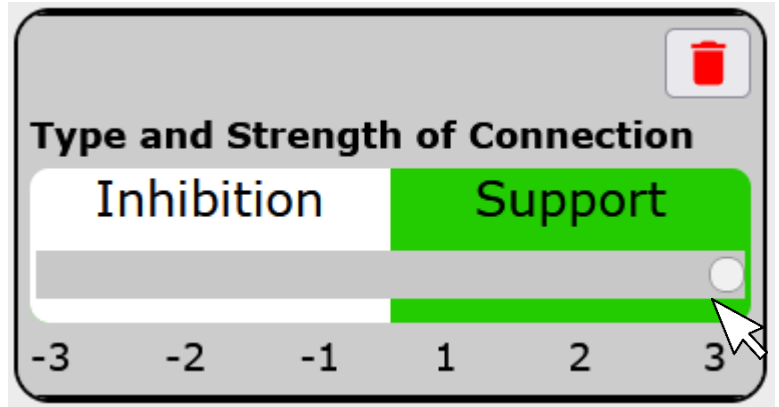


The default setting of a slight solid connection.

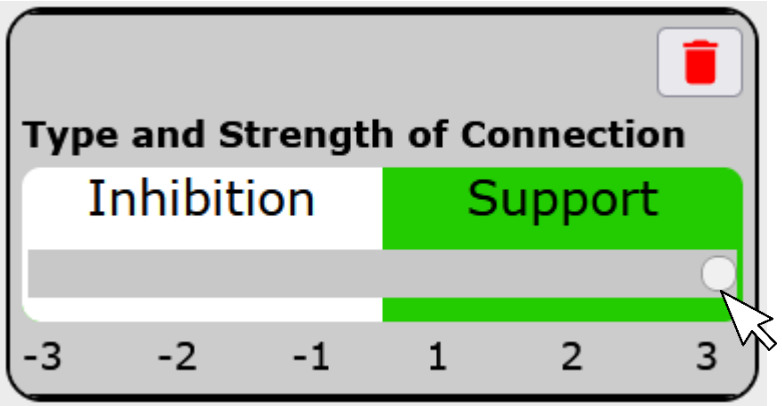
A **solid connection** indicates that **two concepts agree or support** one another.

A **dashed connection** indicates that **two concepts conflict or inhibit** one another.

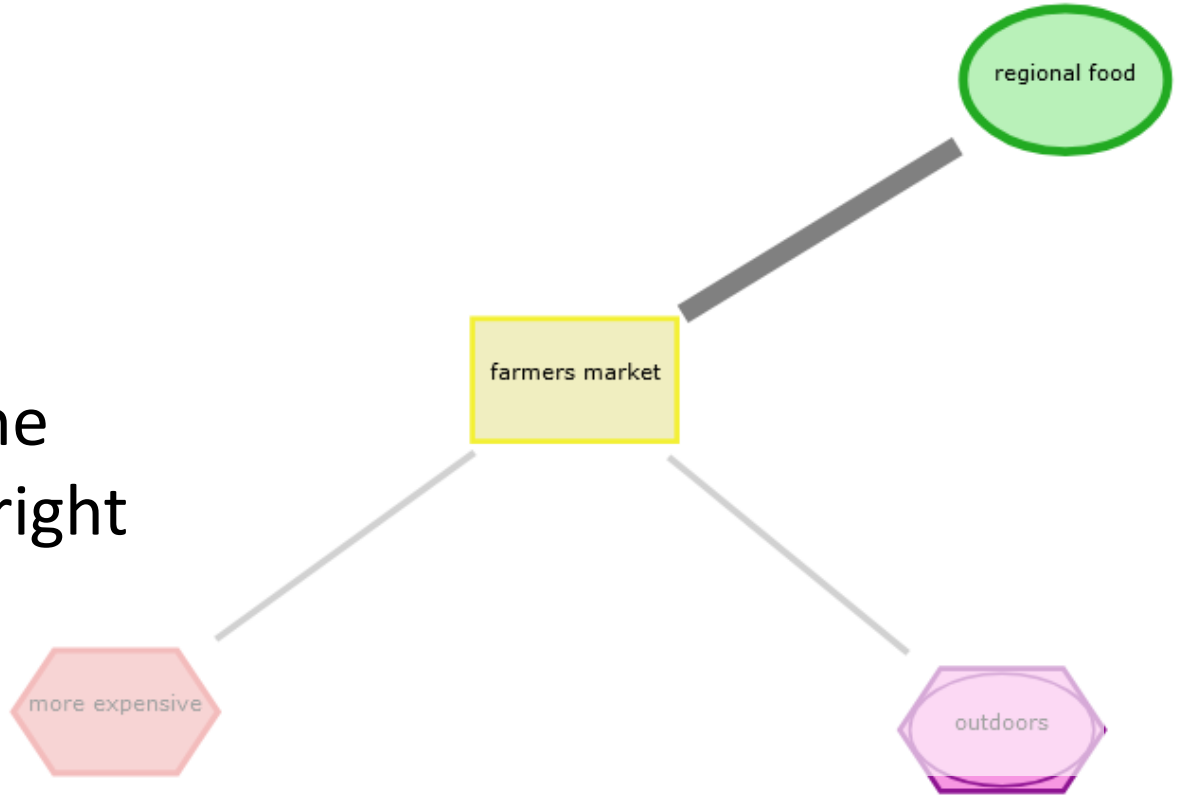
Julia can indicate agreement or disagreement using the slider.



Based on the thickness of the lines, we can see that for Julia, the influence of “regional” food on the decision to go to the farmers’ market is stronger than the influence of “outdoors”

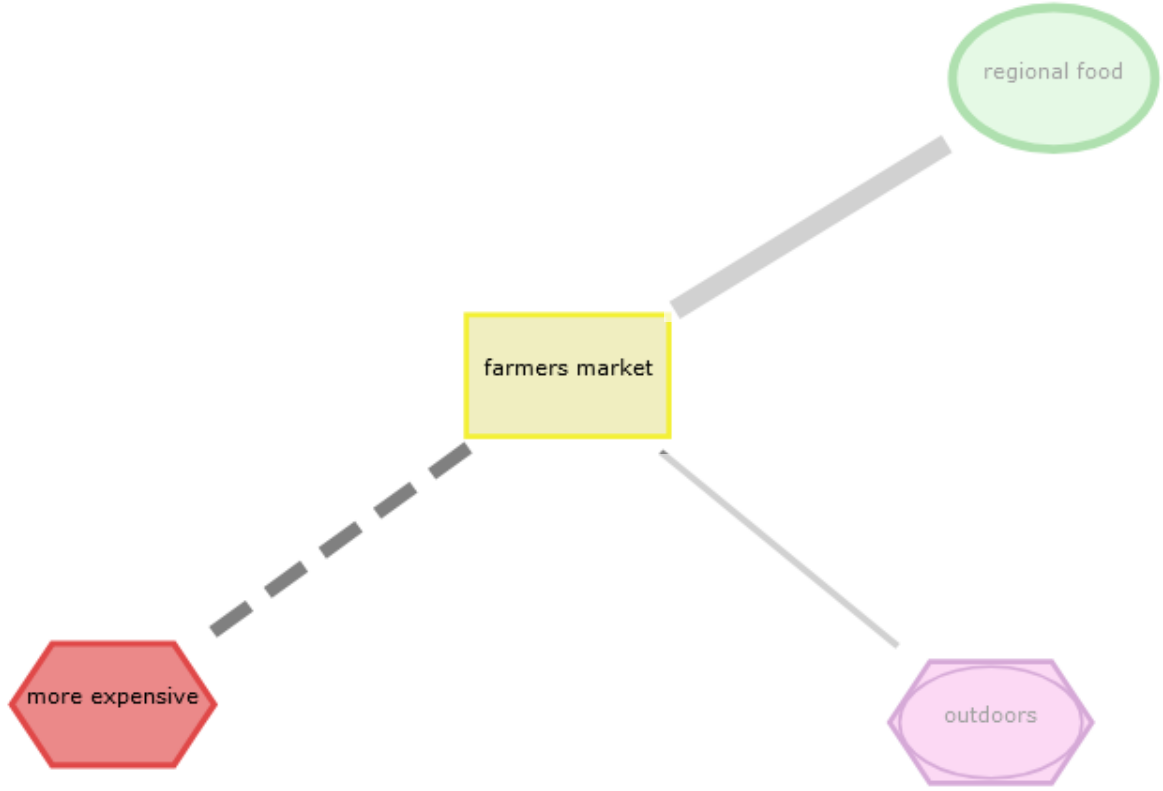


She moves the slider to the right

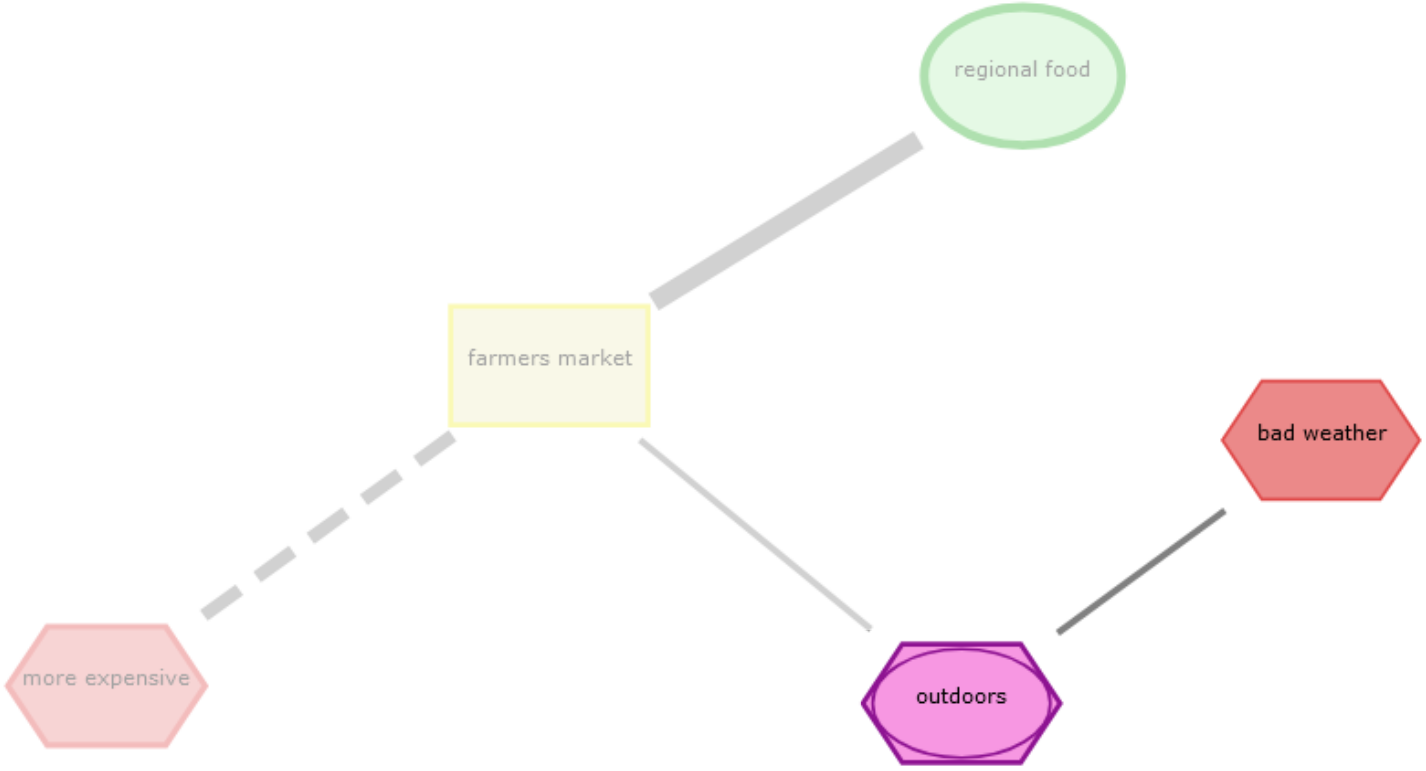


In comparison to the "regional" factor, “more expensive" food conflicts with “shopping at the farmers’ market“ and is represented by a **dashed connection**.

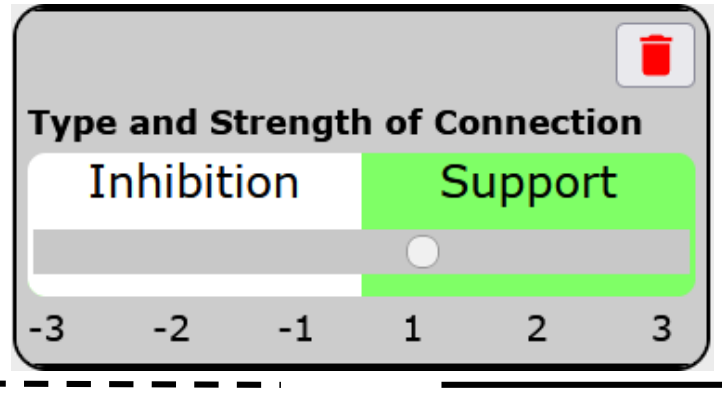
This means: The more expensive the food, the less likely Julia is to go shopping at the farmers’ market.



Note that the type of connection is independent of the type of concept. A negative concept can also be connected via a **solid connection**: This means, as the market takes place outdoors, there is the risk of being exposed to bad weather.



Here you can see again the connector types:



Ideas conflict with each other (inhibit)

Ideas agree with each other (support)

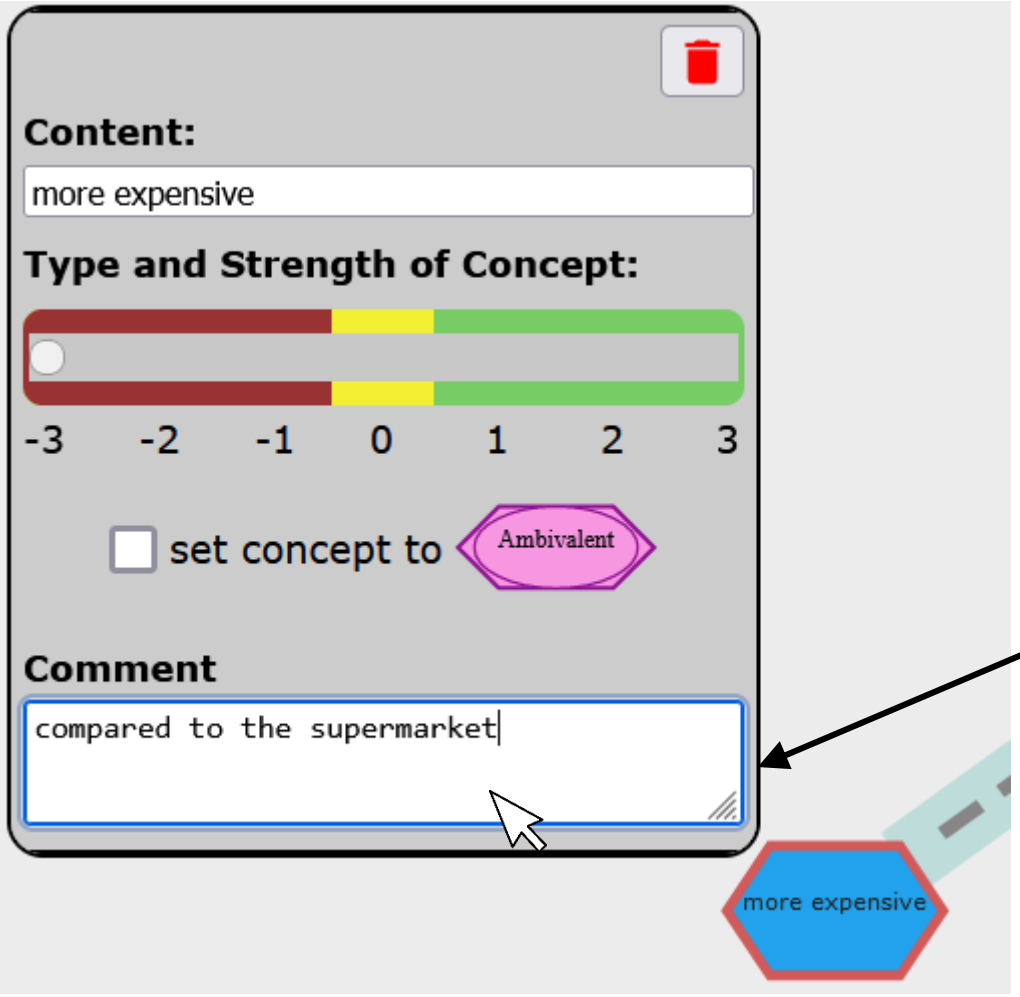
Examples:

- If the weather is bad, I don't go to the farmers' market
- If "bad weather" then no "farmers' market"

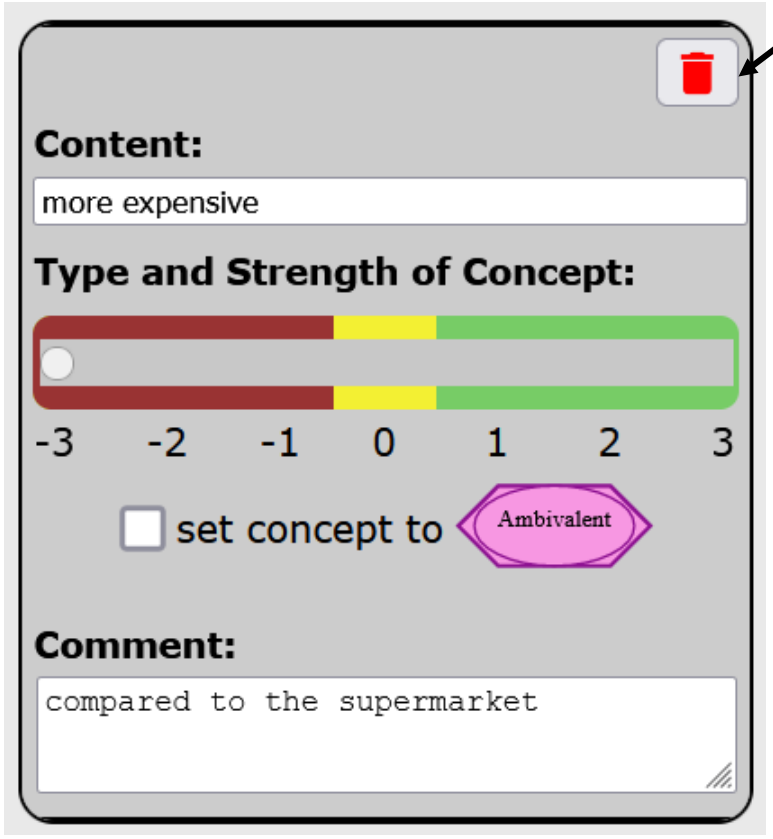
Examples:

- When the weather is good I go to the farmers' market
- - If "good weather" then "farmers' market"

As Julia can only type up to **three words** into the ‘Content’ textbox, she can also **comment** on each concept in her map by double-clicking it and then typing into the ‘Comment’ textbox.



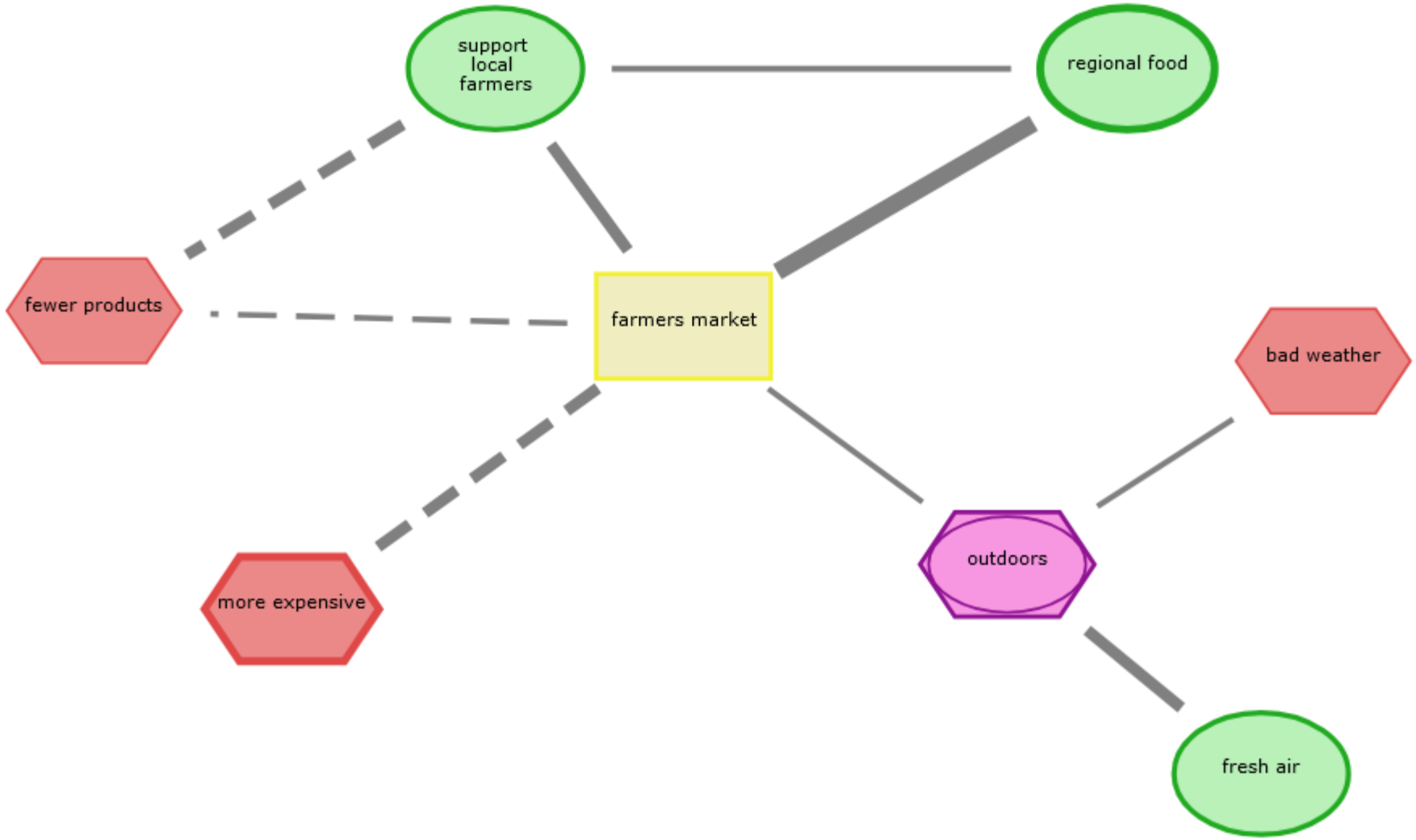
Julia types the following comment in the text box.



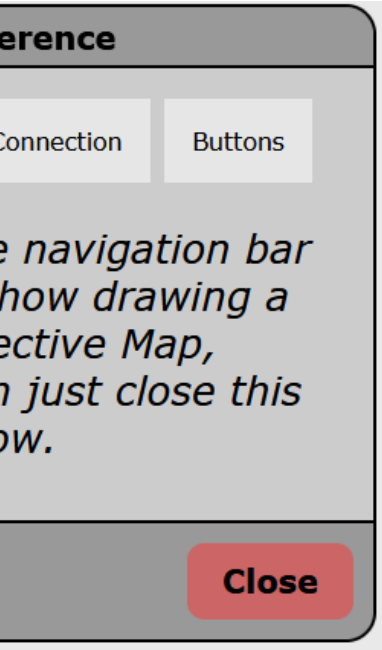
You can delete concepts and connectors by double-clicking them and clicking on the red trashcan-symbol.

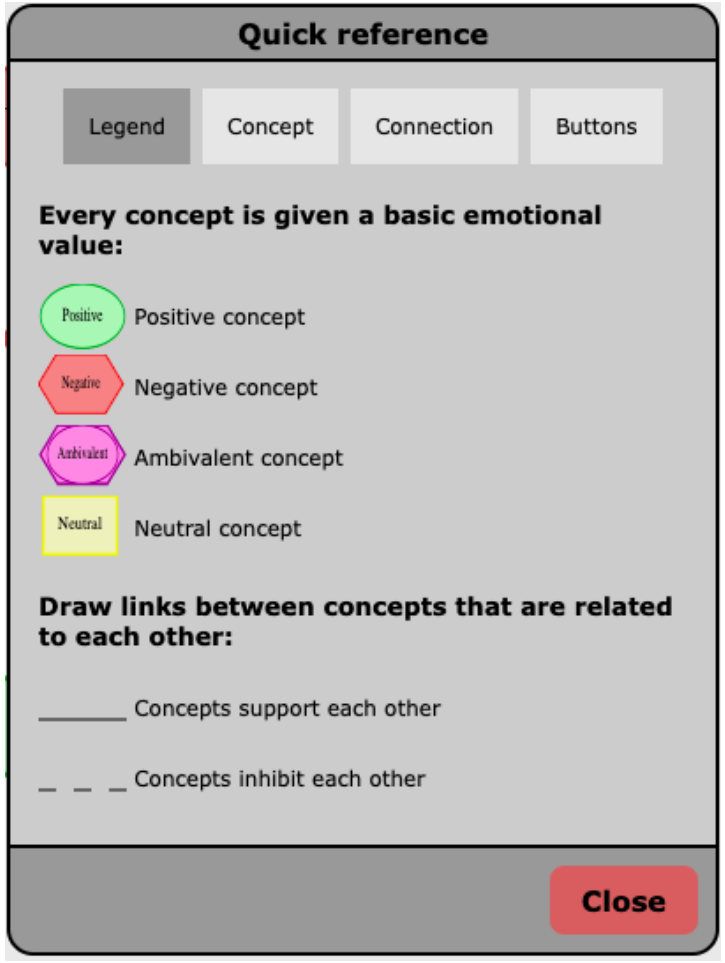
On the next page, you can see Julia´s final map!

Cognitive-Affective Maps

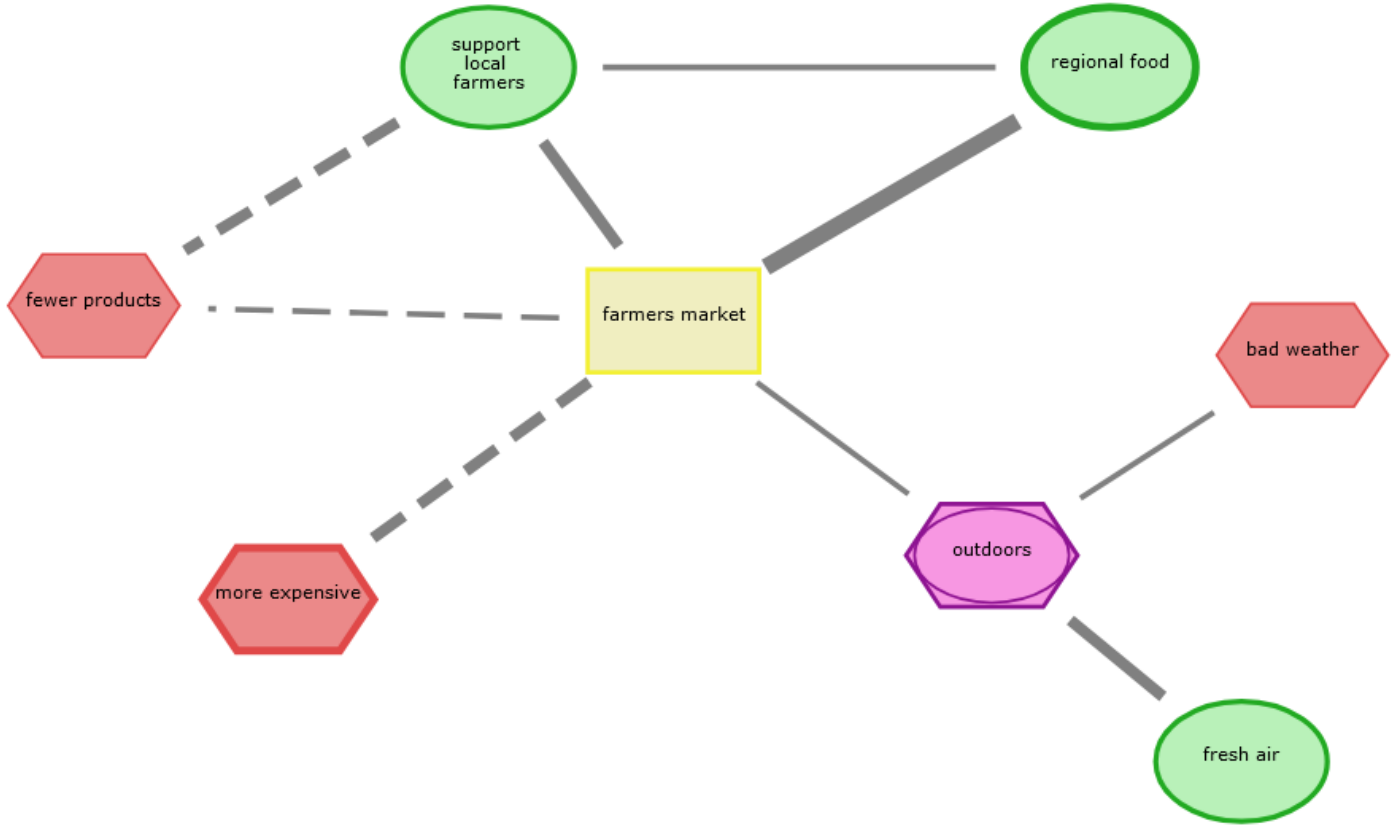


If Julia needs help to draw her Cognitive-Affective-Map, she can click on the green question mark symbol.





A menu with quick references will appear, in which she can navigate by clicking on the topics she needs help for.



When Julia has finished her Cognitive-Affective-Map she needs to click onto the little **disk symbol** to save it.

Note: She can only save her Map when she has **connected all concepts**.

Additionally, she needs to draw **at least XX** concepts to save her Map.