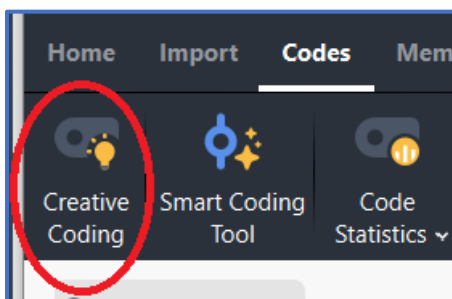


Developing Inductive Categories using the Creative Coding Tool

Introduction: when should you use Creative Coding?

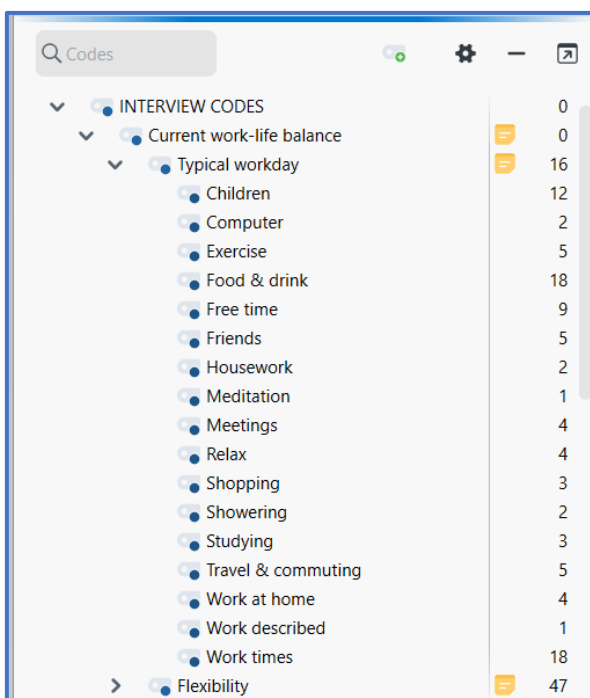
- After initial inductive coding work has been done,
- When you are ready to re-organise or re-structure your coding scheme, to create new groupings of existing codes, including higher-level concepts.
- This tool is more visual and intuitive than simply dragging codes around in the Code System window.
- This tool works with whole codes, together with all of their data segments.
- Start Creative Coding from the **Codes** Menu.



Before exploring this set of tools in a live project please make sure that you have made a backup copy and used the option to open the backup and work in that, so that your master project is safe from unintended changes.

Starting the Creative Coding Tool:

I will work with an example based on the English language "Work Life Balance" example project available in MAXQDA 2024. The standard example has been modified by the addition of some detailed coding work on the section of each interview about a "Typical workday". Below is a screenshot of part of the Code System before a Creative Coding session has begun:

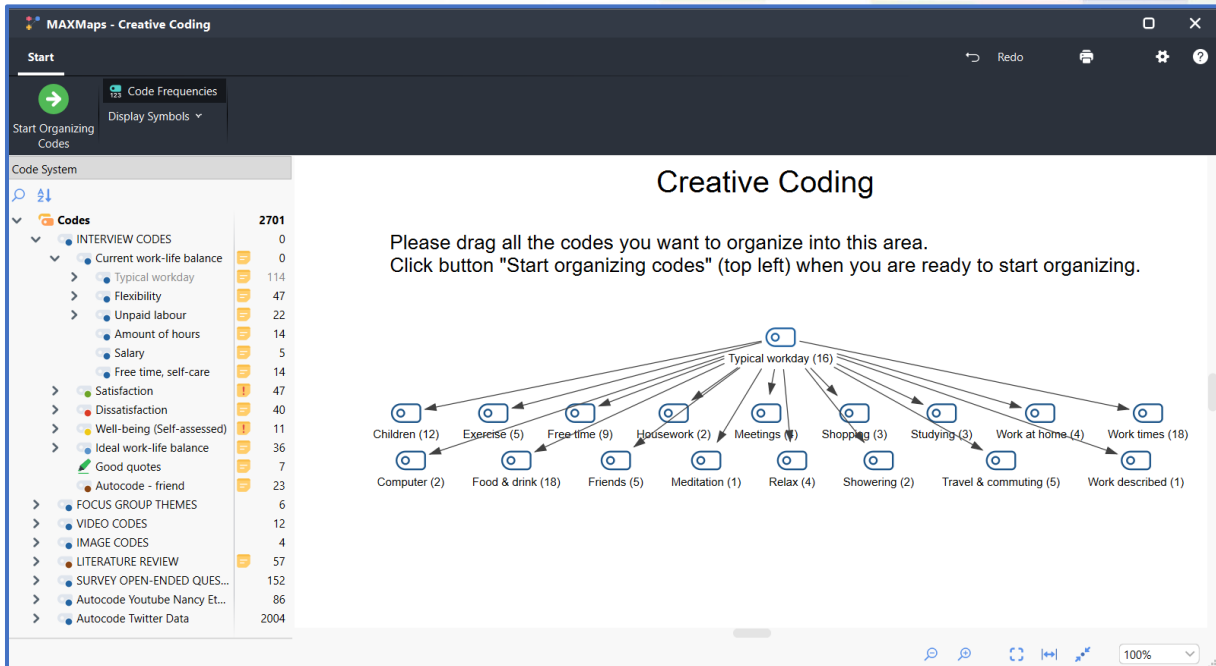


- The "Typical workday" code now has 17 subcodes, identifying a range of activities mentioned by the respondents.

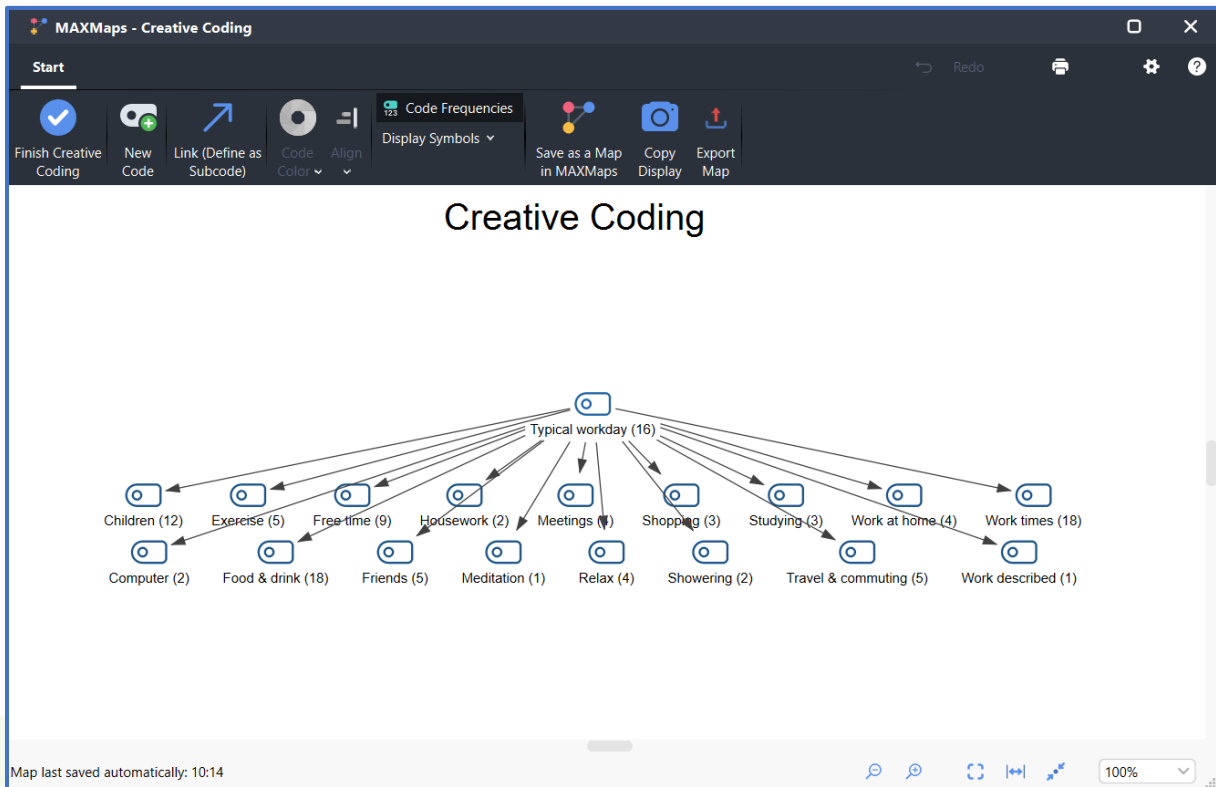
- I will use Creative Coding to group these, as a way to identify higher-level concepts behind them.

The menu option Codes > Creative Coding opens a new window on top of your main workspace and freezes all other functions while it is in use.

Initially, the function window contains an instruction telling you to drag in all of the codes you want to organize. This is a one-off opportunity for each session, once you click on the button to "Start Organizing Codes" in the menu bar you will be unable to add any more existing codes to this session. Until you start organizing you can add or remove codes as much as you like (use a context menu to remove unwanted codes). I dragged in the whole group of "Typical workday" codes in one operation as subcodes automatically come in with their parent codes.



When you are satisfied that you have all the necessary codes, click on "Start Organizing Codes" in the Start menu. The screen changes to remove the Code System panel on the left, and more menu options appear in the ribbon above.

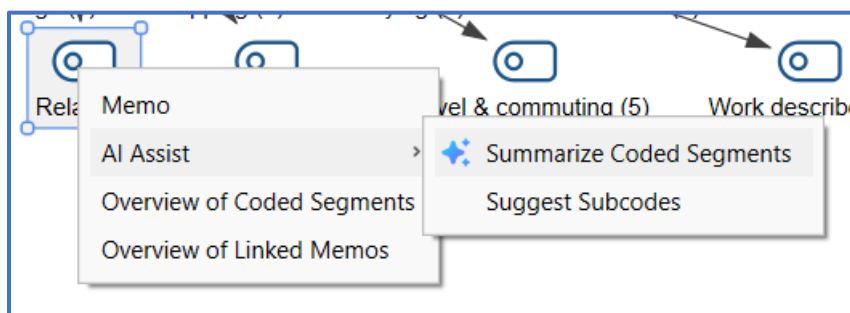


The "creative" stage:

You are now ready to restructure this particular bundle of codes in any way that you like. The only limit is your own imagination. You can create new codes to act as headers/holders for sub-groups of codes and these may well come to be your higher-level concepts. Here we will explore the mechanics of the tool.

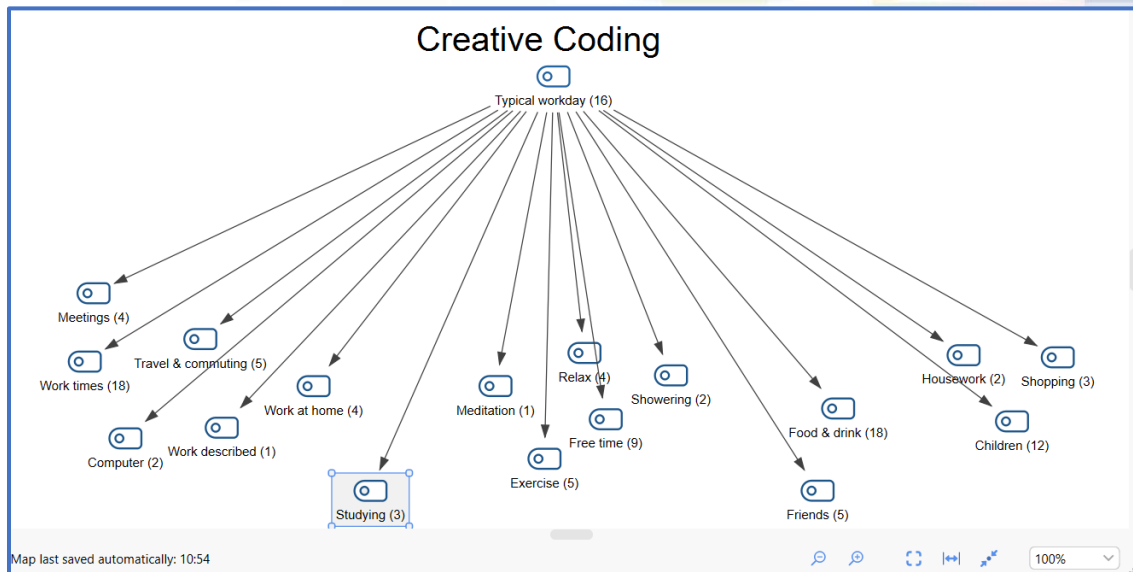
There are two modes of operation, normal and linking modes. In the normal mode you can drag objects around the map. In linking mode you can create parent/subcode relationships by dragging an arrow from one code to another. These modes are set with the "Link (Define as Subcode)" button on the toolbar, this changes to a subtly darker black when you are in linking mode.

Start in normal mode by dragging the code symbols around to explore how they might be grouped by similarities that could be relevant to your research aims. By using the "Overview of Coded Segments" option in the right-click context menu for any one code, you can go back to the source texts to remind yourself of the details behind the code labels. You even have AI Assist options in those context menus to summarise the coded segments or suggest subcodes. And you can open the code memo to check any notes or summaries you have already made and stored there.



This additional information available via the context menus can be really helpful as you look for connections and similarities between some of the codes you are organizing. You are not simply dragging abstract ideas around, you are organizing evidence.

If you are lucky, (or possibly very clever) you will start to see various groupings for your data so drag the symbols near to each other to reflect these developing ideas.

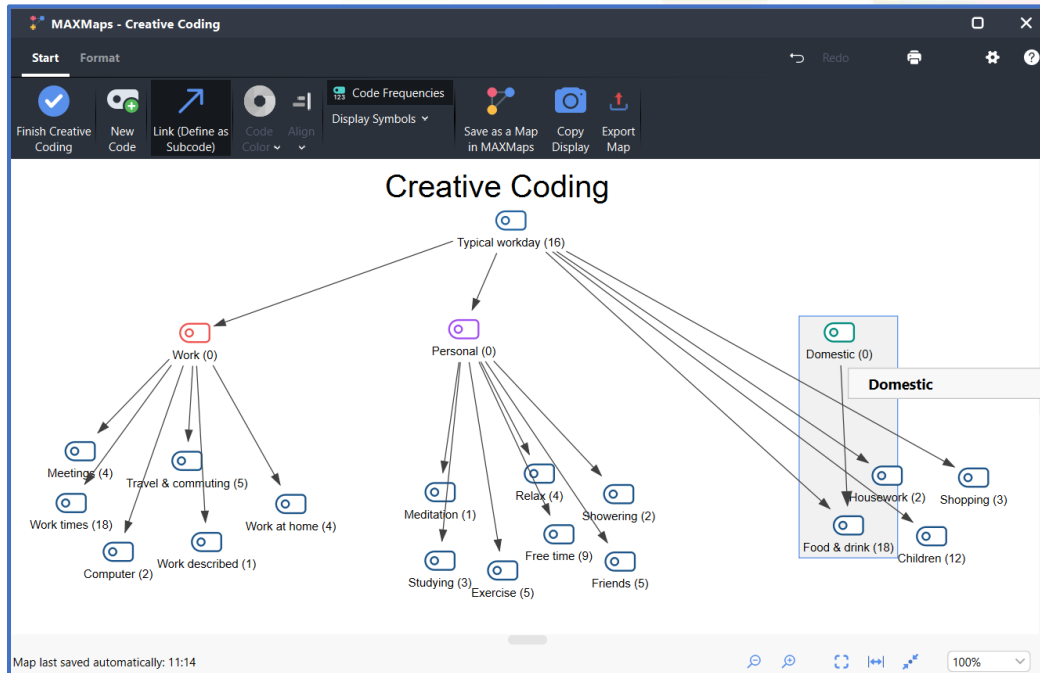


Here is my first, tentative, exploration of this data. To the left, I have placed several themes that appear to relate to work, in the middle are ideas that seem more personal, and to the right are codes referring to domestic activities. At this point I am unsure whether "Studying" is more in the work area or the personal one, so it is placed between those groups. Also "Friends" and "Food & drink" could relate to either the personal area or the domestic one, so they are between those groups. The next step is to explore these particular codes by checking their segments in detail and decide where to place them. Of course, there may well be some themes that simply don't fit into a simple structure and they can be left on their own in such a map.

It may also be worthwhile attempting to find completely different ways of grouping the codes, such as things that make you happy versus things that may give you trouble, or things you can control versus those that appear fixed or imposed by outside forces. The beauty of this tool is that you can store multiple maps to reflect these explorations, and you can return to these ideas multiple times before you settle on the structure that best reflects your data and your thoughts about it.

For the purposes of this demonstration, I will settle on my first ideas and show how to put those into effect in my Code System.

First, I finish moving the codes into their final groups. Then I use the "New Code" function to create codes for "Work", "Personal" and "Domestic" as these are my ideas for what these groups represent.



In the screenshot above, I am part way through the process of linking the new codes into the new structure. "Work" and "Personal" have been linked to their respective subcodes and they have also been made subcodes of "Typical workday". I am still in linking mode (note the blacker background to its icon in the toolbar), and am in the process of linking "Domestic" to "Food & drink" (note the shaded rectangle around these 2 codes). It may take a little practice before this becomes easy for you but please note how the shaded rectangle, that appears as you start to drag the linking arrow, helps to clarify which codes you are linking. If you release your mouse button when there is no shaded rectangle, you will not create a new link. When I released the button, after taking this screenshot, the subcode arrow from Typical workday to Food & drink vanished because a code can only be a subcode of one parent at any one time.

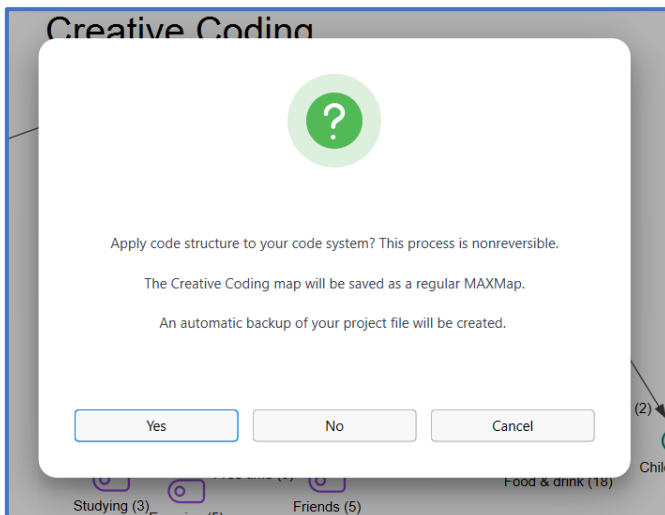
Next, I chose to make all the "Work" subcodes the same colour as their parent, by selecting the "Work" code in the map, clicking on the "Code Color" icon (where I can change the colour of any object) and when a colour is selected (even the existing one) a pop-up window asks if I want to change the colour of all its subcodes.



- Here is my final map before closing this Creative Coding session.

The Impact stage:

When you click on the "Finish Creative Coding" button at the left of the menu ribbon, you see a scary dialog:



- This is the only time in MAXQDA when a map changes your project, all other maps are passive.

- we need to think about these 3 options.

When you click "Yes", all of the codes you have been working on will be moved to the top of your Code System and arranged in the groups and colours of the final map. This is the process that can only be reversed (if you find you don't like it) by restoring from a backup, and so MAXQDA now creates an automatic backup before applying these changes - so in that sense it can be reversed, but it might be costly if

you do further work before deciding to undo this operation. A copy of the final map will be stored in MAXMaps as a record of the changes you have made.

When you click "No" there is no change in your project except that a copy of the final map will be stored in the regular MAXMaps as a record of your thinking, even though you didn't go through with it.

The "Cancel" button is there for the situation where you accidentally clicked the "Finish" button (say while trying to create a new code) and so nothing changes and you remain in the Creative Coding session.

Some further points to note:

During a Creative Coding session, you can merge two codes into one by dragging the code you don't want to keep onto the code where you want its segments to be saved. This can be reversed within that session (with an "Undo" button on the menu ribbon) but when you finish the session with a "Yes" any code merges you have left in place will be carried out in your Code System.

A significant advantage of using the Creative Coding tool for the stage of your analysis where you look for higher-level concepts that can be derived from your inductive coding work is that you can store multiple intermediate stage maps to keep a record and evidence of the way your ideas developed. These could be useful items to include in an appendix to a PhD thesis. You would need to consciously save these maps from time to time by using the menu option "Save as a Map in MAXMaps" (please note that the item in the bottom left of the Creative Coding screen saying "Map last saved automatically ..." is not doing this for you, it is simply updating the current project file in the background).

You will observe that the new code groups you have created will be listed at the top of the Code System in alphabetical order, not in the visual order you created in your map. If that order is important to you then it will be necessary to move them by drag & drop inside the Code System. You may also want to move them back to the part of the Code System where they were before the reorganization.