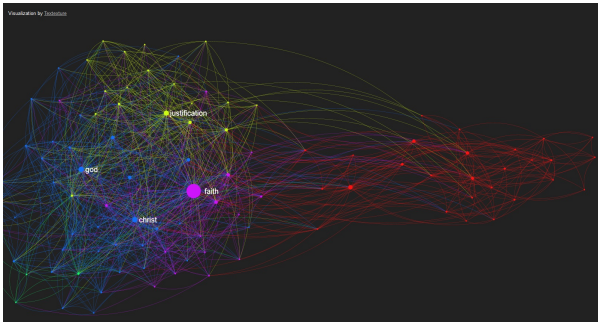


# Texttexture

For an easy and helpful way to visualize one text (as opposed to a large corpus) [Texttexture](#) is a good tool to explore. Texttexture takes texts and turns them into Network visualizations. All you do to create a visualization of your text is copy and paste it into Texttexture. The more difficult part of Texttexture comes when it's time to make meaning or analyze your network graph. Network graphs can be confusing. They're often described as amorphous blobs of spaghetti and meatballs (nodes and edges) untangling them to uncover deeper meaning takes work. It wouldn't be a bad idea to browse through our section on [Network Analysis](#) before you get started with Texttexture. The folks at Nodus Labs (who created texttexture) also have a very helpful [introductory paper](#) on their website.

The gist of texttexture's process is to count words which occur near each other in the text. That is not to say words have to be directly next to one another; paragraph and sentence structures are both considered. In the network, the nodes are the words themselves while the edges (or connections from node to node) are determined by the co-occurrence between words either directly, in paragraphs or sentences. In terms of the visualization, this effectively does two things: 1. organizes groups of words into the communities they appear in (color coded) so that with a quick glance at the network, you can pick out certain themes and 2. You can also easily see the primary theme that links the various aspects together. No. 2. is possible because Texttexture weights the nodes based on Betweenness Centrality, that is, the bigger the node, the more paths from one node to another node in the graph run through it. For instance, after running John Henry Newman's *Lectures on Justification*, through Texttexture, it is easy to see that the main theme or word is "Faith." Faith is not only the primary node within its pink community, but links together the blue community dominated by "God" and "Christ" with the yellow community which centers on "Justification." (For our purposes, we'll disregard the red, as that comprises Newman's footnotes and appendices in Latin)



But, aside from being able to give a good overview of the main themes and related sections of a text, what else is the network visualization good for? In fact, the most useful part of Texttexture is the ability to read your text *through* your network. Start by clicking on any node within your network, (often times the main connector nodes are useful but don't always yield the most interesting results in this regard) now on the left, every section of your text with that word has been brought up and highlighted, so you can easily read the immediate passages that correspond to "Justification" for example. Additionally, your graph will now only show the other nodes that are connected to "Justification." At this point, you can click on any other node in "Justification"'s network, for instance, "Belief" and all of the passages containing both "Justification" and "belief" will come up. Remember, Texttexture takes into account both sentence and paragraph structure, so "justification" and "belief" don't have to be next to each other or even explicitly close for Texttexture to find the passages they are both related to. From here, you can select any node that is connected to "belief" and continue the reading process non-linearly through the network. This process can yield some interesting results. On the surface level, it de-familiarizes the process of reading and can make you read and interpret narrative, causation or any number of elements in a potentially different light. The second function this accomplishes is allowing you to explore connections you might otherwise have overlooked or wouldn't have expected. The de-familiarized, interactive reading process between the network visualization and the text itself is what makes Texttexture a valuable and interesting tool.

What Texttexture does not do so well is statistics. When reading a network graph, being able to bounce between the individual statistics for each node and the wider context of the graph itself is the best way to make sense of it, but in Texttexture, there are no readily available stats. However, what you can do, at the bottom of the interactive graph window, is download the gexf file for your newly built network. Once you download the gexf file, you can open it in Gephi and simply open up the Data Laboratory tab to view the complete stats for all of your nodes. (For more on using Gephi, again see our [Network Analysis](#) pages). For Newman's *Lectures*, the word "Faith" is the most central node in the graph by a number of measurements. Not only does it have the highest betweenness centrality of approximately 605 (over 300 more than the next closest, "God") it also leads in connections with 66 and closeness centrality (measures how close any node is in number of connections from another node) 1.354.

Newman's *Lectures on Justification* were largely an attempt by him to attack the Protestant doctrine of justification by faith alone and prescribe his method for justification which largely centered on obedience (read: discipline) and works coupled with faith. However, reading through the graph (as opposed to linearly) we can see that faith made itself present in almost every aspect of Newman's argument, which is why it was so central. In semantic terms, Newman had to discuss the idea he was attacking "justification by faith alone" along with the idea he was prescribing "justification through faith and works" (works in most cases meaning self-discipline and obedience to the church) thus, though not the central push of Newman's argument, faith was an important component of the work. Thus, as Nodus Labs argued in their aforementioned introductory paper, this tool does a good job at finding the words "which often appear at the junctions of meaning."