

This is a pre-print version of the Timothy R. Amidon's webtext "Brightness Behind the Eyes: Rendering Firefighters' Literacies Visible" published in *Kairos: Rhetoric, Technology, Pedagogy*, 25(1), available at <http://kairos.technorhetoric.net/25.1/inventio/amidon>

Transcript of "Burke Data Visualization Walkthrough" video

Hey everyone, so I just showed how to work through and make sense of the visualizations. In this video, I wanted to point back to a couple of items I covered in the previous video because the visualizations can get confusing quickly.

I just wanted to reiterate that if you're unsure how the icons are working go back and review that video, or if you're unsure how to turn on/off the labels, you're going to want to use this key here. This is Chief Burke's data visualization. This is a subset of data within a larger interview. I've sought to visualize the practices that he mentioned that he utilized while working at a structure fire. In terms of the two data sets that I've visualized, one of the choices that I've selected to do is compare interview data with observational data and to compare an individual who works as a chief officer in supervisor in a managerial role in comparison to Orderville, a crew working at a scene.

These choices are distinct aspects of the data that are notable and worth getting at. Right off the bat, we're going to see that there is a good bit of purple, a lot of visual modalities, and a fair amount of the light blue cognitive modalities. There is also a lot of green/oral red/aural in one of the nodes that represent a cluster of practice.

There is a good bit of listening, talking, sound, and speech are occupying an important role off that specific node. I also see that there is communicative work that is bunched and clustered off of specific nodes, whereas as I see mediational work occurring off of other nodes as well—the knotted clusters. That's one of the really interesting features of the visualizations: when we pull the segments of work together, we can see how there's a cognitive part of work that's occurring in a certain place and more communicative elements of work grouped together elsewhere. But you will also see clusters like this—I believe this is going to be the radio communications; yes it is. We are seeing that there are other mediational aspects of activity grouped in with communicative work practices.

Off the radio communications node, we see Chief Burke isn't simply using the radio to send messages, but also using those practices to listen and evaluate the work that is occurring. For instance, he's evaluating reports from crews, and he's also evaluating the tone of the speaker. If people seem hyped up, he might say ok that person or that crew is encountering something serious and I may need to take that kind of information with a different regard than I might otherwise.

Additionally, off this node—the radio communications node—everything that links to this node has something to do with radio communication. We have evacuation alert tones; we have size up which is a genre that an incident commander like Burke may use; we have notifications, so he might decide to call a utility company to turn off the power so that firefighters aren't exposed to live electricity while tearing walls down. We have evacuation orders, so he might call for this, which is another kind of genre or he may call for a personnel accountability report (PAR) from crews.

Additionally, that node (radio comms) links back to the observe node, where Burke is performing mediational work by observing the radio communications. There are specific examples of mediational observation where Burke is listening to and making sense of radio reports and their tone. Let's go back to the center again. I kind of jumped right into a zoomed in look at a significant cluster of practice. But I also want to kind of back up, again, and just explain how this visualization has been organized.

At the center of this visualization, we have Chief Burke doing one key task. He's managing an incident, and in this instance, he's recalling the work he did while managing a structure fire. From that, there are three main aspects of practice segmented: (1) he doing observation; there is an observational segment where Chief Burke is sense making and tracking distributed work; (2) there is a communication segment; (3) and there is also a planning segment. It makes sense, then, if Burke is planning, that a lot of that work is going to occur within mediational practices and tools. That's why that the links in this segment are dotted; conversely, off of the communication node, we have predominately solid lines. Notice that from the communications node there is the radio communication that we walked through already, and the interpersonal communications segment.

One decision that I've made is that I've sought to create subsegments when a segment becomes a bit unruly. I've represented this hierarchy in information by using capitalization. So, within this visualization, INCIDENT COMMAND, OBSERVE, COMMUNICATE, and PLAN are the main segments of practice. Off the Interpersonal node what aspects of do we see? He might be pushing and/pulling crews, which is tactile and kinesthetic in nature. He might be making jokes, aural and oral. He might be using gesture, kinesthetic and visual. He might be have sounded an evacuation order, so air horns would be going off. He might also be engaging in face to face communication. Finally, off the observational node we have collapse zone, floor plans, architecture, structural integrity, building construction, reading smoke, and 360. Here's a whole set of practices that Chief Burke uses to read and collect information—note that some of these connect to the radio—but a whole set of these practices allow Burke to make sense of... and the bulk of these pertain to what's going on with the building because it's a structure fire. If it collapses, is it going to collapse and make sense of the space and how far away crews need to be to work safely?

Looking at floor plans, if this is a ranch, I may know that the bedrooms are most likely to be here. If this is an apartment complex, I might know that the master bedroom could be there, if I'm familiar with that complex. If there is a certain kind of architecture, I might realize that there are certain kinds of hazards. For instance, parapet walls tend to look like the roof extends to the top, but below that wall (if you get above it) you can see there is a significant gap between the peak of the wall and where the roof is actually located. If you put ladder to the roof, and go over that ladder without looking what's on the other side of roof, you could go for a fall.

So, a chief officer, people like Burke, are trying to get a sense of what risks exist and using visual cues of architecture to read and interpret structural integrity and determine and identify risk.

So, there's a whole set of knowledge that a firefighter fulfilling this role would be bringing to bear on that observational activity. It's also activity that folds back into planning. It's reflexive, highly connected work, where there's a significant amount of shifting and evolving in practice over time during an incident.

Thank you for your time thinking about that!