

Workshop 3: Organisational Culture

Summary



FORGOOD Initiative Update

We began with an overview of the agenda and shared updates we have made to our <u>website</u>, which include digestible summaries of relevant academic papers and case studies applying the FORGOOD framework in a variety of contexts. Liam highlighted that these materials will be continuously updated and are intended specifically for the FORGOOD members. The focus of this workshop was centred on the application of natural language processing (NLP) and textual data analysis to derive insights about organisational culture; this information was presented by Dr Tom Reader.

Dr Tom Reader – Organisational Culture and Risk

How is culture measured?

Tom began the discussion with an overview of how culture is typically measured in organisations today, noting that this primarily includes self-reported staff engagement surveys and perhaps even some interviews or focus groups. He explained that the typical process involves sending out a staff survey, examining trends, interpreting findings and providing recommendations. However, he pointed out that this approach has several limitations as it's top-down, questions are fixed, the findings are presented as averages not specifics and these become less reliable as safety culture worsens. He explained that there are often two groups of people: those who believe it's easy to speak up, and then those who believe they can't speak up, but question whether they should even say this on the survey, and they often don't. He noted that these two groups when averaged suggest that the organisation is ranked in the middle for speaking up, which often masks the underlying issues, therefore responses to surveys can be mixed indicators.

He emphasised that in today's world, there is so much more unstructured data that can be leveraged to really understand culture beyond staff surveys. Tom highlighted that this includes data from Glassdoor, organisational reports, feedback in exit interviews, transcripts from recorded calls and even complaint data, including both the complaint and response to the complaint.

The role of AI

Tom then explained how AI enables the analysis of large text data, in three main ways: bag of words, word embeddings and large language models. He explained how bag of words is the least sophisticated as it requires you to know all of the words that people might use when talking about the cultural aspect you're interested in, this often very tricky as people use different words. Word embeddings are where each sentence is measured against how similar it is to your topic of interest, and large language models enable you to ask questions of your data and it can cluster analysis of topics.

Live Demo - Bank organisational data



Tom then moved onto a demonstration of some of the work he has done with banks and other companies. He demonstrated how he uses NLP & AI to analyse several years' worth of qualitative dummy data (that represents textual data from surveys, exit interviews and Glassdoor) using word embeddings.

He explained how you can use a top-down approach to look at topics you are interested in and understand what people are saying about the topic and the sentiment around it. He explained how they are using word embedding methodology to analyse every sentence across certain topics (e.g agility, achievement, trust, risk) and using a custom-built algorithm for each dimension with a cutoff determining what's included and what's not. He mentioned that at the most basic level you're probably interested in tracking the number of comments related to each topic. He shared that one the biggest benefits of using NLP and AI to analyse this unstructured data is that you're understanding what salient topics are in people's minds as they're speaking about it without being asked, whereas by asking certain questions related to a topic in a survey you're effectively making people aware of the topic. He explained how there are various levels you can drill down to, from understanding the sentiment, the strength of sentiment, exacts comments people are saying and you can then even examine the data by organisation department to identify where exactly it is an issue.

Tom also explained how you can use a bottom-up approach, to potentially identify issues before they arise. To do this he used LLMs, to run a cluster analysis of all of the textual data, to identify all of the topics that people discuss regardless of whether it's to do with culture. Then it labels all the topics, and there's an AI interface where humans can adjust the labels. It helps you to identify the topics that people are talking about (that you're not explicitly asking about), it can also show you which topics are new this year and which topics are constantly talked about along with the sentiment of each comment. There is potential to even direct the LLMs to identify comments related to certain topics e.g Leadership.

He mentioned how if you have textual data from other companies, you can also compare organisations and compare longitudinally too.

Live Demo - Complaints Analysis

Complaints are valuable because they are the end-users experience of the organisation, they're from the outside and there are no repercussions for people for complaining so they provide an independent view of an organisation. They provide a powerful signal of the culture and quite technical problems of the organisation, and they're unsolicited so it's people telling you their experience. An organisations response to complaints, is very revealing as it is essentially the organisation's culture in action.

Tom discussed how he's been looking at how you can use AI and NLP to read complaints and score them, using the same methodology as on the culture data. He's interested in risk incidents being reported in complaints, complaints report these but they are unstructured, very complex and often have lots of issues within them, so it's not easy to scan them or take insights and collate them very easily. He uses AI and NLP to help complaint handlers on the ground to read complaints and then to score the data to provide high level analyses to give an overall profile of all the complaints.



He shared a demo of analysing data from Care Opinion where people report their experiences of their hospital visit. It codes and scores every single sentence in a story (complaint) in relation to safety and risk problems, and then gives an average score for each story, so you can then compare the scores of each hospital. This helps complaint handlers on the ground spot the specific sentences that relate to safety and risk so these can be drawn out and responded to appropriately.

He mentioned that LLMs can be used to score it however they don't do the sentence-by-sentence scoring, so you then can't give an overall score to the hospital or the all the sentences which call the gaps or issues to the hospital.

He wrapped up by highlighting just how valuable this type of analysis is and provided the example of hospital complaints, whereby if you take staff-reported incidents this doesn't predict mortality rates, but patient-reported incidents do predict mortality rates. This is because they're reporting on the real problems going on and they're revealing some about the culture of the organisation, that they're not very good at dealing with problems. Therefore, complaints provide an alternative lens of culture as they are unfiltered and can be used as an early warning system.

Key Discussion Points:

The tension between supervised vs unsupervised analysis (top-down vs bottom-up approach)

There was discussion around how to identify the balance between supervised vs unsupervised analysis. Tom responded that some parameters are needed to guide the analysis, but mentioned that when you study institutional failures, they're quite different from the previous one there's always something slightly different about it. He explained that when you use a top-down model you won't get what you're necessarily looking for because you've already decided what the problems are. Despite the top-down models have more validity, because they have a proven track record and they tie up to the past and are based on literature they're not good at finding the needle in the haystack. He discussed that you need some level of bottom-up, and that this can be achieved this through a combination of both by setting the tramlines for AI but allowing an element of bottom-up analysis.

Ethical considerations in data usage

A significant part of the discussion revolved around the ethical use of data in understanding organisational culture and handling complaints. There was discussion around the need for transparency in data collection and analysis and the importance of ensuring that employees feel safe to share their thoughts without fear of repercussions. Particularly as many participants mentioned that even today there is scepticism about the true anonymity of responding to surveys and therefore how can you ensure you capture true and authentic qualitative responses.



Integration of qualitative and quantitative insights

There was discussion around how leadership tend to favour quantitative data over qualitative data despite this data being biased and there being gaps. However, it was noted that using NLP and AI to analyse textual data helps to attach quantitative data to the qualitative data. The integration of qualitative insights gained from complaints and employee feedback with quantitative metrics is crucial for deriving meaningful conclusions about organisational culture. There was also discussion around the challenges of aligning these data types, particularly when quantitative scores might look favourable while qualitative comments reveal dissatisfaction. Tom highlighted how when there is a mismatch between negative qualitative data and positive quantitative data is where there are likely to be consequences in the real world. This integration is essential for providing a holistic view of the organisation's health.