Instructions for identifying deliberative dimensions in topic model results.

# Introduction

This codebook provides instructions for mapping the six dimensions of online dialogue quality commonly used in deliberative theory (Friess & Eilders, 2015; Goddard & Gillespie, 2023) onto the results of a topic model generated from Reddit moderator responses. The topic model was generated using the BERTopic (Grootendorst, 2022) approach, which clusters similar documents together using sentence embeddings. Our model produced 26 topics (see Figure 1), where each topic is represented by a set of documents, a set of words that indicate those documents, and a title generated from said words and documents from OpenAI’s GPT-3.5-turbo generative large language model (OpenAI, 2023; see also Brown et al., 2020). The research question for this study is *How is the deliberative model of online dialogue quality represented in the topic model results?*

Figure 1: Topic model hierarchical clustering of topics.

A diagram of a clustering diagram

Description automatically generated

# Coding instructions

For coding the variables, we use an Excel spreadsheet with four informative columns providing information about the topic, and six columns referring to dimensions of dialogue quality. The four informative columns include one with the topic name, one with the words representing a topic, and two columns with a representative document identified by the topic model. The six columns for the coder to score refer to the six dimensions of online dialogue quality found in the deliberation literature: rationality, civility, inclusiveness, equality, constructiveness, and common good reference (Friess & Eilders, 2015, pp. 328–331). Table 2 provides definitions of each of the dimensions of deliberative quality.

Table 2: Key aspects of the deliberative dimensions of online dialogue quality (adapted from Friess & Eilders, 2015, pp. 328–331).

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| Dimension | Indicators of the dimension |
| Rationality | Rationality most commonly refers to the use of “argumentation” by participants in dialogue (Friess & Eilders, 2015, pp. 328–329). However, rationality also refers to participants being *on-topic* during their communications (Stromer-Galley, 2007; Trénel, 2004), being *coherent* in their writing (Graham & Witschge, 2003) and participants justifying their points with facts (Ryfe, 2002). A topic is relevant to rationality if it makes any direct reference to participants being on-topic or off-topic, being coherent or incoherent, or any use of argumentation strategies (e.g., justifying their points). |
| Interactivity | Interactivity refers to the degree of interaction between participants (Friess & Eilders, 2015, pp. 329–330). There are two levels to interactivity (Trénel, 2004). First, “formal interactivity”, which refers to whether participants are replying to each other and participating in dialogue (e.g., commenting on someone’s post), and, second, “substantial interactivity, which refers to whether participants are *engaging* with each other’s points (Friess & Eilders, 2015, p. 329). Engagement can range from showing empathising with someone, repeating or rephrasing others’ perspectives, or engaging in a genuine discussion. |
| Equality | Equality refers to the Habermasian (1996) notion that anybody who is able or free to participate in the dialogue should have the opportunity to do so (Friess & Eilders, 2015, p. 330). Equality can either refer to discussions of diversity and inclusion of different identity groups (Monnoyer–Smith & Wojcik, 2012), including issues of race, age, gender, education levels, or the degree to which certain participants dominate the discourse. |
| Civility | Civility refers to the degree of respect (or lack thereof) with which participants treat each other (Friess & Eilders, 2015, p. 330). Civility can vary from indicators of toxic communication (e.g., insults, threats of violence, etc.) to how much participants engage politely and respectfully with each other. Civility can also refer to the degree of empathy and genuineness with which participants engage with each other. |
| Constructiveness | Constructiveness refers to the degree to which participants are engaging with the goal of reaching some shared outcome, such as agreement or building common ground (Friess & Eilders, 2015, p. 331). Generally, constructiveness is about building consensus between participants (Habermas, 1996). Constructiveness can involve participants’ proposing (Trénel, 2004) or discussions (Black et al., 2011) of solutions to a problem in society. It can also be about mobilizing action or using questions to draw out different aspects of a problem (Monnoyer–Smith & Wojcik, 2012). |
| Common good reference | Common good reference refers to whether participants are in dialogue about the common good (Friess & Eilders, 2015, pp. 330–331). This can include bringing people from different backgrounds and viewpoints together to find common ground and build a better world together (Trénel, 2004). A common good reference is any justification that refers to making things better for a wider group or audience. |

Each topic is either coded as relevant or irrelevant depending on whether the *topic title, topic words, or topic documents* make a reference to the dimension or its features. Figure 1 provides a decision tree for when we coded a topic as relevant or irrelevant. We were only interested in moderators’ perspective about *online* dialogue, which refers to the conversations happening on the subreddit or any other public social-media platform (see Goddard & Gillespie, 2023). This means a dimension had to be referred to in the context of user behaviours, the rules of a subreddit, or any general discussion about online dialogue and its quality. This also meant any topic about internal discussions between moderators or discussions between administrators were not considered relevant to the dimension.

Figure 1: Decision tree for coding a dimension as relevant or irrelevant.

A diagram of a diagram

Description automatically generated

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