

Online Deliberative Matrix

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In the last decade, online deliberation has gained visibility in the fields of political science, political philosophy, political communication, and big data analysis. The term ‘online deliberation’ corresponds not only to a topic of analysis that can be broadly defined as the quantitative and qualitative assessment of the political debates taking place in the digital public sphere, but also to a model of e-democracy that aims to shape the different political usages of the web (Dahlberg 2011). In this chapter, I present one particular method to assess online deliberation: the Online Deliberative Matrix (ODM) (Janssen and Kies 2005). This matrix refers to the criteria aiming to contextually assess the quality of deliberation taking place in online spaces. It can be used for any political debate occurring on the web.

The chapter is structured into three sections. In the first section, I argue that the *ideal speech situation* and the *two-track model of democracy* advocated by Habermas are still relevant theories to operationalize and assess online deliberation, especially from a systemic perspective. Next, I present a way of operationalizing online deliberation by distinguishing between: (1) the criteria that can be used for assessing the visible presence of deliberation (inclusion, discursive equality, justification, reciprocity); (2) the criteria for assessing the deliberative attitude and intention of the active and passive users of the forum (reflexivity, empathy, sincerity); and (3) the criteria for assessing the expected outcomes of a deliberative process (plurality, external impact). In the final section, I briefly review several studies that fully or partially use the ODM to evaluate the deliberativeness of online debates in different contexts.

Measuring Online Deliberation

The ODM was first developed in 2005 (Janssen and Kies 2005) building on the first attempts to measure (online) deliberation (Schneider 1997; Dahlberg 2004; Graham 2002; Steiner et al. 2005), and further elaborated some years later by reviewing the operationalization of certain criteria and how their ‘score’ should be contextually interpreted (Kies 2010). ODM takes the Habermasian idea of deliberative democracy as its normative starting point. As such, it refers to the ‘ideal speech theory’ (Habermas 1989) and the ‘two-track model of democracy’ (Habermas 1996). While

ideal speech theory provides us with the deliberative criteria to be measured (to be discussed below), the *two-track model* directs our attention to the levels of the opinion-formation and decision-making processes within which these deliberative ideals can be realized. The two-track model promotes a dynamic political process according to which the deliberative project is to be achieved as a result of the interactions of, on the one hand, the ‘strong publics’ (in particular, parliament and government) where decisions are taken, and, on the other hand, the weak publics (in particular, civil society) where new issues of public relevance can arise. Amidst these two publics is the general public dominated by the mass media (newspapers, television, radio) where the opinions and demands of the weak publics and those of the strong publics are presented and debated. In order to promote the appearance of a critical and informed public opinion, the media should be independent through the use of self-regulation procedures. They should also give visibility, without any distortion, to the opinions coming from the different publics, particularly the weak ones (civil society), which have lesser public and political influence (Habermas 2006).

By referring explicitly to the systemic theory of Habermas, the ODM constitutes an early attempt to take into consideration the ‘systemic turn’ in the analysis of online deliberation (see Parkinson and Mansbridge 2012). The reference to the two-track model implies the necessity to adapt the deliberative criteria, in particular their evaluative standards, to the contexts in which the online forums are taking place. Accordingly, these standards should be defined by the *external impact* and the political/ideological beliefs of the social or individual actors hosting the online debate. The ‘external impact’ is a proxy for distinguishing the weak–strong distinction present in the two-track model, which helps to identify the constraints and functions of a discursive arena within the opinion- and decision-making process. In the next section, I will provide some examples of how the external impact influences the standard applied to several deliberative criteria. But before doing so, let me present the criteria considered to measure deliberation for any type of online discussion space.

Table 10.1 lists nine deliberative criteria used in the assessment of online deliberation. As noted above, these criteria were developed through a close examination of the Habermasian ideal speech theory and the two-track model of democracy. In the next section, I will show how these criteria can be contextually operationalized.

Operationalization of Deliberative Criteria for the Empirical Study of Online Sites

For the empirical analysis, the criteria are merged in three analytical categories referring to different aspects of the deliberation and methods of investigation. The criteria of *inclusion*, *discursive equality*, *reciprocity*, and *justification* seek to measure the apparent presence of deliberation, that is, the level of deliberation assessed through the analysis of the discursive architecture of the forum, and the dynamic and content

Table 10.1 Criteria for the Online Deliberative Matrix

Deliberative criteria	Meaning
Inclusion	All who are affected by and/or interested in the issues under discussion should be able to participate either actively or passively.
Discursive equality	Participants should have an equal opportunity to introduce and question any assertion whatsoever and to express attitudes, desires, and needs.
Reciprocity	Participants should listen and react to the comments formulated by other participants.
Justification	The opinions and propositions should be accompanied by accessible justification(s).
Reflexivity	Participants should critically examine their values, assumptions, and interests, as well as the larger social context.
Empathy	Participants should be sensitive to other views and opinions, not only of those present during the debates.
Sincerity	Participants must make a sincere effort to make known all relevant information and their true intentions, interests, needs, and desires.
Plurality	A deliberative context should be one in which a plurality of voices is heard even if these voices are critical of the dominant opinions/ideologies.
External impact	A successful deliberative process should have an impact on the opinions and decisions that are taken outside the context of the debate.

of the discursive exchanges. Conversely, the criteria of *reflexivity*, *empathy*, and *sincerity* measure the non-visible aspects of deliberation. They focus on the conscious or even unconscious deliberative attitude and intention of the active and passive users of the online forums. Finally, the last two criteria, *plurality* and *external impact*, assess two expected outcomes from a successful online deliberative process: first, that it was able to confront a diversity of relevant voices and opinions; second, that it has an impact outside the online forum. To remain synthetic, I will not review in detail how other scholars have measured these criteria, but instead will focus on the ODM methodology.¹

Criteria Related to Apparent Presence of Deliberation

Inclusion

The normative requirement of inclusion is that all those who are affected by, and/or interested in, the issues under discussion should be able to contribute and read

¹ For a review of the existing attempts to measure online deliberation see Kies (2010), Monnoyer and Wojcik (2012), Mendoza (2015), and Friess and Eilders (2015). — (here is the correct name Mendonça (2015))

others' contributions. The operationalization of the requirement of inclusion in an online environment implies that researchers assess mainly three types of threats for inclusion.

The first threat is the digital divide, understood as the difference between people who have easy access to the Internet and those who do not. To test whether the digital divide influences inclusion, we should observe, first, whether people have access to a device with an Internet connection and, second, whether they have the capacity to access and contribute to an online forum. Researchers can report descriptive statistics on Internet access, computer ownership, and survey data on Internet use and Information and Communications Technology skills. For example, several Eurobarometer surveys provide information to assess the connectivity and digital skills in EU Member States.²

The second aspect concerns the moderation regime and/or technical architecture of an online forum as well as the requirements of registration and identification that can make access easier or harder and can thus be reported as factors that affect the level of inclusion. A moderation regime can vary a lot. It can be more or less intense: from no moderation at all to active moderation. It can occur before posting a message (i.e. pre-moderation), or after the posting of a message (i.e. post-moderation). Finally, moderation can be more or less conducive to inclusive and deliberative debate. The moderator can be a 'censor'—for example, by removing opinions that are at odds with the main ideology of the discussion space—or they can be a 'promoter of deliberation' by, for example, implementing a system of synthesis of debate, by giving more visibility to minority opinions, by offering background information related to the topics, etc. Some empirical findings suggest that well-balanced moderation is crucial to enable an inclusive and deliberative debate (e.g. Wright and Street 2007; Janssen and Kies 2005; Edwards 2002). That being said, several studies also underscore that high levels of moderation can negatively impact the experience of deliberation on perceived procedural fairness, validity claims, and policy legitimacy (e.g. Meyer and Carey 2014; Perrault and Zhang 2019). As far as identification is concerned, it is important to be aware that while anonymity can increase the quantity of participation, it can simultaneously lower the quality of the content (Towne and Herbsleb 2012).

Finally, researchers should also observe whether the institutions hosting and/or promoting the online forum were proactive in making the online forum as inclusive as possible. We should observe whether there were attempts to reach the categories of people who would not spontaneously participate in online political forums (for example, older people, the less educated, those with visual impairments, etc.). Researchers are invited to observe, amongst others, whether the online forum was advertised in other media, whether specific training was planned for users, or if participation was encouraged through vouchers, money, gaming, etc.

² See, for example, special EB (2020) 'Attitudes towards the Impact of Digitalisation on Daily Lives', available at: <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm>.

Discursive Equality

The normative requirement of discursive equality is that participants should have equal opportunity to introduce and question any assertion and to express attitudes, desires, and needs. We suggest that it should be measured by first assessing the ‘distribution of voice’ in a conversation on the assumption that if only a small number of participants contribute in a large proportion, they dominate this debate. This idea of dominating the conversation is operationalized in a ‘participant contributions’ statistic. The distribution of the number of messages posted per participant may provide an indication that one group is dominating the conversation. This is not problematic, per se, as it is also a common experience offline that a minority of participants dominate a debate. However, it can be problematic if certain participants feel that their expression has been hindered by the dominant group. In certain cases, this can be deduced by reading the content of the forum itself (see empathy criterion), but ideally it should be measured through survey/interviews to find out whether participants feel that their views were suppressed (e.g. Graham and Wright 2014). In connection with the criterion of plurality, researchers are also invited to assess to what extent the active participants are representative of the internal and external variety of opinions (see plurality criterion).

Reciprocity

Reciprocity aims to assess whether participants listen and react to the comments formulated by other participants. If citizens do not listen to and interact with each other, there can be no deliberation, only monologue. The level of reciprocity should be measured by assessing, at a basic level, the proportion of postings that are part of a thread versus those that initiate a thread (Schneider 1997). This measurement, however, only provides an approximation of the level of reciprocity. It is indeed possible that a message in the same thread is not a reaction to the content of a preceding message. A message in a thread can just as easily be a monologue without any reference to preceding messages or the topic of the thread. For this reason, an in-depth evaluation of a message, which implies the reading of a message, is necessary in order to observe whether the message is a response to a past message contained in the forum. Here we suggest following the coding of authors like Jensen (2003), which uses the categories of ‘initiate’ (a message initiates a new debate), ‘reply’ (a message is a reply to a previous message), and ‘monologue’ (a message is not really part of a debate). But even a more refined approach based on reading the messages can be problematic insofar as the absence of genuine reciprocity does not necessarily mean a lack of deliberation and, inversely, the fact that a message is reciprocal does not necessarily imply that this message is deliberative.

This leads us to the question of interpreting the findings. What does it mean when the reciprocity level of a thread, forum, or news comment section is low? It can mean that participants do not listen to each other, but just state their opinions as well as frustrations: this is the typical dialogue of the deaf. The absence of reciprocity may also reveal a lack of interest in the topics discussed (Bentivegna 1998) or reflect a

general agreement about the topic discussed so that participants do not feel the need to react. Finally, a lack of reciprocity may also mean that (some) forum participants simply want to share information about a specific topic (see Kies 2010, chapter 6). A lack of reciprocity can have a multiplicity of meanings. To reach a refined evaluation of it, I suggest that no deliberative value should be given if it reflects an absence of interest, tacit agreement, sharing of information, etc. A negative deliberative value should only be given when the lack of reciprocity discloses an absence of a disposition to listen to each other.

Justification

The normative requirement for justification is that the opinions and propositions should be accompanied by accessible justifications. This means that there can be no deliberation if citizens appeal only to the authority of revelation or if their justification is based on complex arguments that only a restricted intellectual elite would understand (Gutmann and Thompson 2004, 4). With regard to the types of messages for which the level of justification should be assessed, we argue, like Fuchs (2006), that it makes sense to measure the presence of justification only for messages containing ‘opinions’ and ‘suggestions.’ These are, after all, the messages for which a justification is expected. There is a plethora of attempts to measure justification that are more or less elaborated and relevant (see Kies 2010, 46–48). Our coding of justification is inspired by that of Jensen (2003). Accordingly, we should measure: (1) if an opinion/suggestion is justified; and (2) if the type of justification is ‘internal’ (based on personal viewpoints and values) or ‘external’ (based on facts and figures). However, we reject the normativity of Jensen, in that arguments based on ‘objective’ information are better than those based on personal experience. As suggested by the two-track model of Habermas (1996) and by other authors (Mansbridge 1999; Young 2000), justifications based on personal experiences can be as useful as those based on facts for the promotion of deliberative values. Particularly in weak and informal public spaces, the presence of internal arguments (storytelling, testimony, etc.) can enrich the debates and allow citizens who feel uncomfortable with rational-critical debates to express themselves freely.

Researchers who are particularly interested in justification can also focus on the ‘level of justification.’ Here the coding schemes of Fuchs are also relevant. He measures ‘the complexity of arguments’ by distinguishing four degrees of argumentation: ‘one-dimensional message’ (no reason for holding an opinion); ‘simple message’ (one reason is communicated); ‘rather complex message’ (two reasons are communicated); ‘complex message’ (three or more reasons are communicated). The measurement of complexity of justification is optional. It should also be noted that its deliberative interpretation is particularly complex as an opinion does not necessarily need complex justifications in order to be sufficiently justified.

Criteria Related to the Deliberative Intentions of Participants

Reflexivity

Participants in a debate adopt a reflexive attitude if they critically examine their values, assumptions, and interests, as well as the larger social context. One of the defining features of reflexivity is 'open-mindedness'. This means that deliberating actors (e.g. citizens or public officials) must be ready and willing to change their opinions and preferences if they are sincerely persuaded that their initial opinions or preferences are incorrect or inappropriate for addressing the collective problems. Approaches based on content analysis attempt to find instances of reflexivity by reading the content of messages sent (Jensen 2003; Fuchs 2006), particularly whether these messages express opinion or preference change. Such a measurement is, however, often meaningless insofar as it supposes that, in order to be deliberative, a debate should necessarily lead to persuasion, change of opinions or conflict resolution when in fact what the deliberative ideals require is the 'readiness' to change opinion if one is sincerely convinced by the arguments of someone else. An absence of opinion change should not be interpreted as non-deliberative behaviour if the concerned person is sincerely not convinced by another's argument. Therefore, a different approach may be necessary to capture reflexivity as an internal process, and its manifestations may not always be expressed in an online forum.

One possible approach to uncover reflexivity's internal dynamic is to combine content analysis with surveys and/or interviews. Surveys may also generate insight into the behaviour of 'lurkers', who are by far the most numerous users of the forum. Lurkers can also be questioned about the way they have been influenced by the online debates. I suggest that the questions should focus on whether the active and passive participants of the forums 'felt better informed' and 'took a moment to reflect about disagreements'. There are several examples of how to formulate a questionnaire for the purposes of measuring reflexivity in different contexts (Jensen 2003; Hansard Society 2006; Fishkin 1995).

Empathy

The criterion of empathy can be defined as '*the extent participants take into account and are sensitive to other participants and positions, not only those immediately present in the forum*' (Dahlberg 2004, 33). Alongside the criterion of sincerity, empathy is a cardinal indicator of deliberation, since all others derive more or less directly from it. Concretely, this means that if someone is genuinely concerned by the opinions and preoccupations of their fellow citizens, they will be more eager to interact with them (reciprocity), to justify their opinions (justification), and to change their mind if sincerely convinced by an argument (reflexivity). Since these criteria aim at the participants' internal disposition—a proclivity for considering others' opinions—its

measurement is complex and necessarily limited (e.g. Neumann et al. 2015). That being said, a partial measurement of empathy can be obtained by using several complementary methods:

- (1) Content analysis by counting cases of disrespect. These are cases such as personal attacks, dirty words, and xenophobic or homophobic declarations;
- (2) Survey/interview analysis by raising questions that seek to grasp whether participants entered into the debate with the intention of listening to others' arguments and also to make other participants aware of external positions (that they do not necessarily share);
- (3) Deductively observing the scores of the deliberative criteria of reflexivity and sincerity, as they are generally positively correlated with empathy. If we find that the levels of reflexivity and sincerity are high in a forum, then we can suppose that participants are sensitive to the opinions of others and willing to reach a consensus.

Sincerity

Sincerity requires that all participants undertake a sincere effort to make known all relevant information and their true intentions, interests, needs, and desires. While sincerity appears to be a fundamental criterion, both for measuring deliberation for a specific case study and in a systemic perspective of deliberation (more on this to follow), it is to date the most poorly empirically investigated because it is also the most difficult to grasp. The presence of sincerity can nevertheless be grasped through different approaches. The first approach is to perform a qualitative analysis based on 'consistency in speech, consistency in speech and action, and coherence' (Chambers 1996, cited in Dahlberg 2002, 34). An inductive approach could look for instances where participants' inconsistencies are exposed by other participants or it could seek out inconsistencies in speech and/or actions themselves. The second one is based on forum participants' self-reporting (passive or active) using interviews and survey analysis. Since it is unlikely that participants who were not sincere would respond sincerely to an interview or survey, the question should be formulated in an indirect and subtle way. Lastly, as the perception of sincerity is also likely to have an impact on the dynamic and deliberative quality of debates, active and passive users should also be asked about whether they believe that other participants in the online forum were sincere.

Criteria Related to the Deliberative Outcome of the Process

Plurality

The criterion of plurality aims to evaluate whether an online discussion hosts different and divergent opinions. It is a fundamental criterion for evaluating how successful a debate has been in hosting and confronting all the relevant opinions on a

specific topic. It is linked to inclusion and discursive equality as both are determinant factors in promoting plural debates. I argue that the ideologies of the online deliberation's host or organizer are the best variable to define the standard applied to the criterion of plurality. For example, we could expect more diversity of opinions in an online forum hosted by a mainstream and neutral newspaper than an online forum hosted by a partisan newspaper. I would therefore put a higher standard of plurality for the first than for the second.

A mixed-methods approach combining content analysis with survey should be privileged for assessing plurality. The content analysis of the web forum will allow us to assess the presence of different opinions on the issue at stake, while the survey analysis assesses the forum users' diversity by focusing on socio-demographic profiles (gender, age, education, occupation, etc.) and their political involvement and affiliation. The results of such surveys should, however, be carefully assessed since the socio-demographic homogeneity or diversity of a public does not necessarily imply that the debates will be homogeneous or plural (Best and Krueger 2005). In order to avoid such flaws, a method that combines content analysis with survey analysis is clearly recommended.

External Impact

A successful deliberative process should have an impact on broader public deliberations taking place outside the online forum. I argue that external impact is the best proxy for the weak–strong distinction in the two-track model. Researchers must identify and define the constraints and functions of an online discursive arena for it to have impact in the opinion- and decision-making process in the macropolitical sphere.

There are different methods through which to evaluate the external impact, depending on the type of forum analysed and the objective of the researcher. The external impact can be assessed:

- (1) By looking at whether there are concrete proposals of action. Jensen (2003) measures the external impact by assessing the presence of explicit signs that a sender is trying to extend discussions to an external agenda. He counts instances where participants attempt to 'attract the attention of a politician', 'propose political actions', or 'refer to external effect of a discussion';
- (2) By assessing whether participants in an online forum are influential outside the forum (Hangemann 2002; Coleman et al. 2002; Beierle 2002). We suppose that the more well-known the participants in the forum are (e.g. journalists, politicians, intellectuals, influencers), the more likely they are to have an external impact;
- (3) By assessing whether decisions taken outside the online forum were inspired by opinions/proposals discussed in the online forum. This measurement is particularly common for discursive e-consultation processes. Such studies generally assess to what extent suggestions coming from the forum were

considered in the final drafts of policy proposals and whether participation in the forum led to more positive opinions of the institutions that hosted the forum (Beierle 2002; Coleman et al. 2002; Hansard Society 2006; Kies and Nanz 2013).

The evaluative standards applied to the external impact should be adapted to the contexts in which the forum takes place. For example, the external impact requirements should be more demanding for an institutional e-consultation process, than for an online forum without any institutional affiliations. This is because in a genuine institutional consultation process, the decision makers and/or the administration are bound to take into consideration the opinions and suggestions emerging from the online public.

Illustrative Studies Referring to ODM

There are several studies referring to the ODM to evaluate the quality of deliberation in different contexts. These can serve as concrete references for any researcher planning to use the ODM for their own research. For example, the ODM has been largely used to evaluate the level of deliberation of the Italian Partito Radicale (Kies 2010, 117–142; Kies 2009), to compare the deliberative processes used in voting for proposals emerging from the online platform Plaza Podemos and the online development of the electoral programme of Barcelona En Comú (Bravo and Sáez 2016), and to evaluate the most commented on citizens' proposal discussed on the Barcelona government's platform Decidim (Bravo et al. 2019). The ODM has also been largely used to compare two Slovenian online proposal portals: one emerging from the government and the other emerging from the citizen, with the objective of exploring whether the weak versus strong nature of the platform influences the quality of deliberation (Črnič and Prodnik 2015).

Other interesting studies refer to the ODM to define and operationalize a limited number of deliberative criteria. This is the case with several experimental pieces of research that explore how certain factors affect the quality of deliberation, such as anonymity (Berg 2016), temporality (Strandberg and Berg 2015), and the effect of antisocial behaviours (Smith et al. 2012). The ODM is also a source of inspiration to evaluate the deliberativeness of interaction on social media. For example, it has been used to evaluate YouTube comments in respect of LGBTQ rights (Oliveira et al. 2014), the Facebook and YouTube channels of the White House (Halpern and Gibbs 2013), as well as user-generated political commentary on candidates' Facebook pages during the 2008 and 2012 US Presidential elections (Camaj and Santana 2016). Finally, the ODM was used to review the deliberative quality of news website forums (Quinlan

et al. 2015), and of consultative debates on different topics and at different levels: from local (Sampaio et al. 2011) to European (Karlsson 2012; Kies and Wojcik 2011; Kies et al. 2013).

Conclusion

The objective of this chapter was to provide a synthetic overview of the ODM. It is important to underline the criteria it contains as well as their operationalization, remain open for discussion and improvement. Indeed, it is common to see research that utilizes the ODM, or other methods, as a starting point to develop their own methodology of investigation. This speaks to the fact that we are still far from having an uncontroversial method of investigation. In particular, the criteria aiming at assessing the deliberative attitudes of participants (i.e. reflexivity, sincerity, empathy) could be improved by referring to the existing methods for assessing socio-psychological behaviours (e.g. Neumann et al. 2015).

Potential improvements to the ODM may also emerge from the foreseeable shift from human coding to machine coding. The rapid growth in the usage of opinion mining and sentiment analysis (Pirayani et al. 2017) is likely to evolve in the near future into instruments that can automatically measure the deliberativeness of a web forum. Such an evolution is to be welcomed, as it will allow for real-time measurement of deliberation in different contexts. But it also raises important questions. Outcomes may be misleading as automatic coding, even with the support of Artificial Intelligence, is unable to grasp certain linguistic nuances or expressions and is unable to provide contextual interpretations of the deliberative scores. More importantly, the vast amount of data that will be freely available through web-scraping could also be (ab)used for economic or political purposes, as is the case for the personal data that Internet users leave for free (Zuboff 2019). One should be aware of these dangers and elaborate guidelines and rules that can guarantee that online discussion forums are protected from such interferences.

Another major challenge will be to adapt these criteria to the changing online discursive environment. While until recently the usage of video-conference platforms tended to be limited to workplaces, since late 2019, in reaction to the COVID-19 pandemic, the usage of video-conferencing platforms (e.g. Zoom, Webex) has boomed in all sectors of life, leading to a hybridization of discursive exchanges—combining video, audio, and written exchanges. This major shift is not about to stop or reverse, and as such it will require new methods to evaluate the level of online deliberation, combining, for example, content analysis with body language and voice intonations. This will certainly enrich the possibilities for assessing online deliberation, but it is not likely to simplify the process. In any case, no matter how fast and how

profoundly the online discursive means and methodologies evolve, the ideal deliberative theory of Habermas and its followers remains a key reference point to preserve online public spaces from the current risks of colonization by economic and political interests.

Further Reading

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