Where Should I Send my Post?
The Concept of Discourse Quality in Online Forums and its Dependency on Membership Size

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ABSTRACT

Today's Web users are faced with a large number of available online communities for every domain. While there are rules-of-thumb for the choice of a specific community, the validity of these heuristics has hardly been tested empirically. Furthermore, there is a lack of well-founded measures that allow for a systematic comparison of different online forum communities. In this contribution, we propose the concept of discourse quality as a means to this end. This measure is conceptualized from a user perspective and combines quantitative as well as qualitative parts, including a codebook for content analysis. To show the applicability and the usefulness of this measure, we systematically compare 34 online forums with varying degrees of membership size. We are able to show that the forums with the most members online consistently show high discourse quality. Finally, we discuss the potential of benchmark measures for future online community research.

Keywords

Online forums, online communities, discourse quality, member activity, content analysis,

INTRODUCTION

Online communities have for a long time proven to be useful platforms for knowledge exchange as well as for socializing activities (e.g., [21]). We can thus find a vast number of research contributions that highlight social aspects (e.g., [17][20]), economic potential, e.g., [10], as well as technological support.

Most of these approaches, however, focus on single communities and the interaction between single users or a group of users. Today, however, a web user is faced with a vast number of forums and possesses little guidance for deciding which platform might be more useful for him or her.

There are certain rules-of-thumb to make assumptions on the higher quality of certain forums (e.g., the presence of a moderator, recent posting activity etc.). However, the

validity of these heuristics has hardly been tested with empirical data. Further, there is a lack of well-accepted benchmarks to identify what actually constitutes a "good forum-based community."

To fill this gap, we propose a way to measure the usefulness of an online forum based on the quality of the discourse among the members of a community. Our measure is conceptualized from a user perspective and is a combination of quantitative (e.g., number of replies to a submitted post) as well as qualitative measures (e.g., consistency within a thread). For the qualitative parts, we present a codebook that provides a set of content analysis variables for the classification of threaded message content, along with a number of metrics to capture discourse quality.

To show the usefulness and the applicability of our approach, we use the discourse quality measure to identify key trends driving the relationship between membership size and discourse quality. While it may be intuitively plausible that more active communities have advantages compared to less active ones, we have to be aware that a growing community membership also entails a number of disadvantages. For example, information overflow is likely to increase as well as effects such as diffusion of responsibility. Further, larger communities have not only a larger number of possible repliers but also a larger number of question-askers. This implies that in larger communities, a submitted post competes for attention, with many more posts submitted almost simultaneously.

Despite these disadvantages, our data show that large communities do show a better discourse quality. For example, posts that are submitted to active forums will more likely receive at least one answer and are likely to receive a higher number of replies. Additionally, this does not lead to an increased rate of off-topic (not travel-related) posts. Finally, we are able to characterize the respective communicational patterns that are typical for highly active, as well as for less active, online forums. After the application of our discourse quality measure to this research question, we elaborate on the general contribution of such a measure to future multiple community research.

THE CONCEPT OF DISCOURSE QUALITY

The concept of discourse quality in online forums can be approached from numerous perspectives and will always reflect the context of a specific research question. The discourse can be analyzed with regard to the level of empathy or the level of collaboration - as done, for example, in the research area of health communities (e.g., [4][18]). Another domain that has been intensively analyzed is that of learning communities in the educational sector (e.g. [3][9][11][12][22]). Here the question of interest usually is: Does more involvement in the community lead to better learning outcomes? Then, within the context of governance and online deliberative democracy new insight has been contributed focused on citizen empowerment and political decision-making processes [6][8]. [7] focused on the characteristics of authors and the subjective evaluation of their contributions by other community members. However, none of these approaches developed a category system to systematically compare the usefulness of forums.

Our conceptualization of discourse quality is based on a user perspective. It is modeled according to the rationale of what should be perceived as beneficial when users with communicational and/or informational needs interact with a forum. Our perspective also embeds the metaphor of online communities as information systems as proposed by Prestipino & Schwabe [19] and Schwabe & Prestipino [23]. This approach takes the perspective of a community member with certain information needs. The relevant question in this regard is: How well does the community satisfy this information need? While our approach is based on this perspective and is reflected in our measures, we explicitly recognize the fact that online communities are not only question-answering platforms but also socializing platforms.

It is for this reason that we did not confine our concept to the aspect of "answer quality" but chose the more general concept of "discourse quality." This conceptualization accounts for the fact that initial posts do not necessarily have to be questions but can also be suggestions, recommendations or exclamations of any kind. Furthermore, a considerable share of communication in online forums is not directly related to knowledge exchange. An analytical restriction to question-answer pairs would therefore fail to fully grasp the communication pattern in these forum platforms. Thus, in a general sense, we take the perspective of a community member who sends a post to the forum.

One decision that had to be made within the course of this research was to choose an appropriate analysis unit. In accordance with Rourke et al. and Howard et al. [22][13] we defined a forum thread as our basic unit of analysis. A thread always consists of one or more posts, and is always started by an initial post that can be either a question or a statement of any kind. This also holds for the replies (in the sense of "possible reactions"), which can be either answers to a question, a criticism about the question, making fun of or flaming the initial poster, or adding a completely off topic remark.

This analysis unit was conceived in accordance to Henri's [12] definition of interactivity. According to her framework, not every thread guarantees interactivity, as there are some prerequisites that must be fulfilled. These are described as a three-step process of interactivity: communication of information, a first response to this information, and a second answer related to the first. Thus, we consider a thread as the meaning unit that represents the possible satisfaction of a communicational need from the perspective of the user. It is the smallest meaningful semantical sequence which can provide an enhanced discourse quality by giving participants the chance to make more mentally processed and focused contributions, that increase the quality, focus and effectiveness of the discussion [15].

In relation to this basic analysis unit, we define discourse quality from the perspective of a forum member as a combination of quantitative and qualitative measures as follows:

Discourse Quality = f (reply quantity, reply quality)

On a general level, we argue that discourse quality depends on the quantity and quality of the replies. This implies that more replies in a shorter time are an advantage, but only if the quality of these replies is on a certain level. In the following sections, we further elaborate on the measures of reply quantity and reply quality, and discuss the rationale behind these concepts.

Reply Quantity = f (Probability to receive at least one reply, Waiting time until first reply is received, Total number of received replies, Total number of distinct repliers)

In addition to the total number of replies, we consider the probability to receive at least one reply as a separate measure. The rationale behind this conceptualization is that a single correct reply can already fully satisfy the information need of the poster. Further replies underlie a possible effect of diminishing marginal returns, as every additional reply contains fewer added informational value than does the previous one. We also chose this conceptualization to distinguish between all initial posts that receive at least one reply and those that do not receive any replies at all. We consider the latter case a failed

communicational act within a forum discourse. In addition, a shorter waiting time until the first reply is received, seems to be an obvious advantage for the poster. We expect this waiting time to be of increasing significance as more and more communities are accessed from mobile devices, and thus information needs might emerge more and more from onsite contexts.

Regarding the total number of replies, we argue that more replies are advantageous compared with fewer replies. This holds especially true for open questions such as, "What are some cheap but nice hotel rooms in London?" In addition, it can also be an advantage for factual questions, since subsequent replies might add crucial facts or, even more importantly, might correct previously given incorrect information. Finally, we include the number of distinct posters within a thread, arguing that a thread that includes more individual knowledge sources is superior to a thread with fewer sources.

We argue that these concepts also hold in the case where the initial post is not a question. If an initial poster sends a comment to the forum, we consider this a communicational act. We assume that this person also wants to trigger a reaction and engage in the community discourse. With this train of thought, it is logical to think that the availability of more replies in shorter time-spans driven by a greater number of different communicators is more attractive to the user. As we discuss below, all these assumptions hold only if the longer threads involved do not suffer from a systematic decline regarding the inner quality of their content.

Reply Quality = ƒ (Reply discipline, Communicational exchange pattern)

As already pointed out, a purely quantitative measure would fail to do justice to the overall concept of discourse quality. Therefore, we include two aspects of reply quality: the reply discipline and the more general concept of the communicational exchange pattern.

Reply discipline = ƒ (Topical relationship of a post to the general topic of the community, Topical relationship of a reply to the initial post)

The reply discipline is divided into two concepts. The first is whether the post relates to the declared overall topic of the respective forum (e.g., does a post that is sent to a travel community indeed cover a travel-related issue?). Incidences where this criterion is validated might include personal attacks (flaming or trolling), content with purely commercial interests (distracting off-topic advertisement) or other off-topic discussions (e.g., political debates that have no connection to travel issues). Secondly, we also considered the concept of the consistency of the thread

propagation. To this end, we assessed whether the replies 1 to n still had a topical relationship to the initial post. To distinguish these two concepts, note that the initial post can be completely unrelated to the declared topic of the forum, while all following replies could still have a topical relationship to this initial post. This measure appears relevant since we assume that a possible information need of a community member is declared in the initial post. As soon as the incoming replies deviate from this information need the thread loses value for the submitter of the initial post.

Communicational exchange pattern = ƒ (Kind of the initial post, Kind of the reply)

Finally, we consider the actual content of the communication within a thread. For this purpose, we distinguish between two basic categories: the initial post and the replies that are received. Regarding the initial post, the two main categories are whether it is a question or a comment. As for replies, we developed a content analytical category system consisting of 14 categories, including options such as "Explanation/Answer", "Follow-up Question", "Aggressive Behavior" or "Easy Talk that has no obvious informational value."

For these reply quality measures, we developed a codebook based on content analysis research methods. To measure the extent to which our codebook is reliably achieving the consistency required in content analysis, we calculated the intercoder (or interrater) agreement. To this aim, we compared the conclusions that independent coders reach when evaluating the same variables using a codebook. Two coders coded 20 identical threads for all variables contained in the codebook. Coding was done independently and without consultation or guidance. The number of concurrent answers is divided by the total number of possible answers in order to get the intercoder agreement. The results show an average agreement of .985 across all variables. This suggests that this codebook is adequate for examining the forum discourse qualitatively. The full description of our categories as well as the coding instructions can be found in Appendix A.

USING THE DISCOURSE QUALITY CONCEPT TO RESEARCH THE IMPACT OF COMMUNITY MEMBERSHIP SIZE

In the first part of this paper, we introduced the concept of discourse quality to operationalize the usefulness of online forums from the user perspective. This leads to the question of which factors could have an impact on discourse quality and, thus, could be used to predict or influence it. To demonstrate the applicability and the usefulness of our measurement concept, we chose to research the impact of membership size. While it might be a rule-of-thumb that

communities with more active members are more useful than communities with less active members (e.g., see [1] for some post-hoc evidence in this direction), the connection between these two measures is actually non-trivial.

The impact of group size on the productivity or efficiency of a group has been extensively researched. The findings of this comprehensive research, however, produced numerous contradictory results that prompted [16] to refer to the "paradox" of group size. Essentially, as groups grow larger, there emerge positive as well as negative influences.

First, to start with the positive effects of a growing online community, there will be a larger number of persons who can reply to a submitted post. The likelihood thus increases of finding one or a few persons that are knowledgeable about the submitted topic of interest. Further, while the total number of possible repliers increases, this number can also have a positive impact on the individual's willingness to contribute replies. Butler [5] refers to this aspect as "audience effect" arguing that the larger a crowd is, the more motivation a member has to submit a reply, as it will be received by a wider public. This aspect is related to an increased feeling of self-efficacy [2] when the possible number of persons who can appreciate a contribution is larger. These effects can influence the quantitative as well as qualitative reply measures: More members tend to produce more replies, and individual members might be more cautious regarding discourse discipline and content of reply due to the larger effect of their contributions since they will be read by more people.

There are, however, numerous forces that counteract these positive aspects. First, forums suffer from information overload when too many members are participating, cf. [14]. This can lead to posts just "flying by" without potential repliers having enough time to pay attention to the information requests, thus leaving many initial posts unanswered. On an individual level, there is also a force that counteracts the positive audience effect: diffusion of responsibility or social loafing. This can lead to a situation in which community members do not bother to reply because they deem that there are enough other community members who will reply. Further, a growing community membership can lead to a certain fuzziness of the social cohesion. This means that the number of weak links between community members probably increases. This might lead to a situation where a poster questions the worthiness of replying to an initial post that was sent by a weakly linked community member.

Finally, in addition to these described factors, we have to be aware that our conceptualization of discourse quality depends not only on the willingness of forum members to send replies to initial posts, but also on the number of initial posts that compete against each other for attention of all available community members. If the average willingness to send a reply to a post goes hand in hand with the average information need (i.e., number of submitted initial posts), the number of increased members could not solely account for a higher discourse quality.

Against the background of these contradictory empirical findings, we pose the following research question: *Can active membership size (i.e., the average number of members online) be regarded as a valid predictor of discourse quality in online forum communities?*

METHOD

To empirically investigate the relationship between membership size and discourse quality, we sampled a number of online forums in the tourism domain, resulting in 34 communities. For these forums, we monitored the number of members online for the period of about eight weeks, from May 18 until July 12, 2009. We then randomly sampled 15 threads (wherever available) and analyzed these threads using our discourse quality conceptualization.

Sampling communities and monitoring activity measures over time

We conducted a general search for online travel forums to gain a comprehensive sample. For this first sample we used the following criteria:

1) The platforms had to be classical forums realizing the threaded question-answer structure typical for forum communication (thus excluding travel wikis or newer community types such as social networks).

2) The main purpose or one of the main purposes of the forum had to be travel-related information exchange. The forum members had to discuss typical travel-related topics (e.g., how do I find a certain place? What are suggestions for travel-related behavior? What are attractive things to see or do in a certain region?) We also included forums from related areas (for example, surfing) if these communities had a considerably large sub-category that dealt with travel-related aspects (traveling and surfing).

3) All communities had to be English speaking.

For this search, we used the following search engines: Google, Yahoo!, Altavista, Live Search by Microsoft, the meta-search engine Mamma as well as Boardreader. Keywords used include: "Travel Forum", "Traveler Forum", "Travel Board", "Independent Traveler Forum", "Independent Traveler" and "vbulletin travel."

The initial search results comprised of a total number of 120 travel communities. Most community platforms publish the total amount of users online, registered

members online, as well as guests online. In most cases, guests are users that have access to read the threads but are not allowed to ask or answer questions. These activities are usually exclusively granted to registered members. A few forums allowed unregistered guests to ask or answer questions, which we excluded from our sample. We programmed an automatic script that read out the number of registered members online four times a day in a six hour interval. The following analysis covered an eight week period from May 18 to July 12, 2009.

We also excluded from our sample those communities that were severely spammed during our analysis interval. In addition, we chose to analyze only those forums with more than 80% valid measurements during our period of analysis. At the end, our sample over the eight week data collection period consisted of 42 travel-related online communities.

To obtain the average activity level of these 42 communities, we calculated the average number of members online over the entire analysis interval (4 measurements a day * 56 days = 224 measure points). Figure 1 shows the communities as well as the mean number of members online. The figure shows that the community landscape is characterized by a "long tail" distribution. Comparably few communities with a very active member base are accompanied by a large number of communities with only small activity levels.

Figure 1: The mean number of members online for 42 travel communities

Sampling of the threads

We conducted our analysis selecting 15 threads from each of these 42 forums. Since we were interested in travel-related communication, we sampled these threads from community sub-areas that dealt with travel related topics (usually the main area of the forum). We did not consider more remote areas of the forums that dealt with technical questions about the use of the forum, general feedback

about the forum or categories that were clearly marked as not being mainly travel-related (e.g., How to buy property for persons who would like to immigrate to a certain country).

The selection of every individual thread was based on a randomized procedure. Using a random-number generator, we selected one of the pre-defined subcategories, which had been manually numbered from 1 to n. If there were more subcategories on the next level, we repeated this random selection until we got to the thread level. We then generated a random time and date between May18 and July 12, 2009. From this randomly chosen point in time, we selected the next thread we could find in this time interval. Thus, we only chose threads that started (i.e., had their initial posts) during our analysis period.

Even though we used a duration period of about eight weeks, some of the communities had such small member activity that they did not have a total of 15 threads in the entire time interval. We thus included only those forums in our final sample that had at least 5 threads, resulting in a total of 34 forum communities (27 having 15 threads and the remaining 7 having at least 5 threads). We then applied our coding scheme to these forum threads for a total of 469 threads and 1772 posts.

RESULTS

Reply Quantity

Probability to Receive at Least One Reply

Figure 2 shows the probability in every forum of receiving at least one reply. The data show that this probability is higher for highly active communities (at least 87% for the top 8 communities). To statistically assess the correlation between the average number of members online and the probability of getting at least one answer, we calculated the non-parametric Spearman's r_s test due to the non-normality of the average member distribution. This test resulted in a significant positive correlation (r_s = .595, N=34, p<.001, two-tailed).
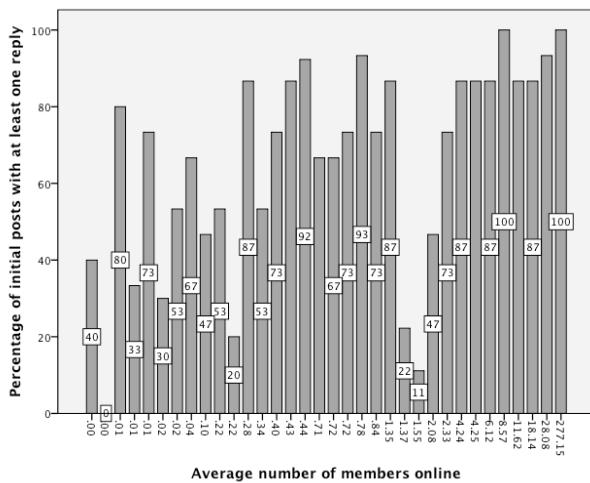
Figure 2: The reply probability for the 34 analyzed online forums

Waiting Time Until First Reply

Figure 3 shows the average time in hours until the first reply to an initial post is received. Again, the data show that the communities with most members online (top 8) show a consistently low waiting period (for most threads within one day). For the remaining communities, the waiting time varies considerably. Some forums with few members online still show comparably short waiting times but the average waiting time is increasing considerably. The Spearman's r test resulted in a significant negative correlation ($r_s = -.705$, N=32, p<.001, two-tailed).
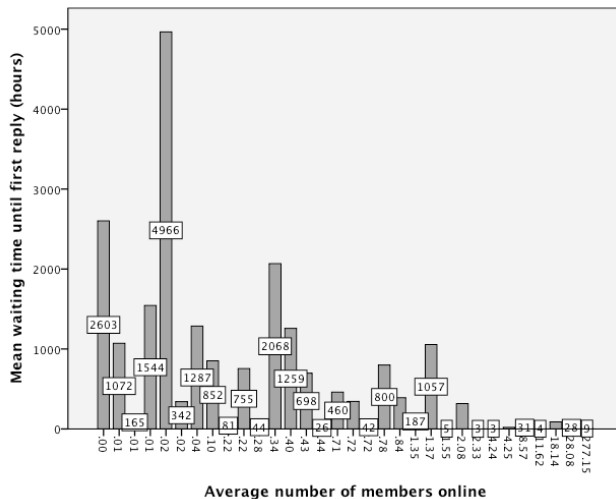
Figure 3: The mean waiting time until the first reply is received (in hours)

Average Number of Replies and Posters

Figure 4 shows the average number of replies in all examined forums. Again, the data depict that more replies are received in highly active communities than in less active communities (an average of approximately 6 replies for very active communities). The Spearman's r test resulted in a significant positive correlation ($r_s = .611$, N=34, p<.001, two-tailed). We also find a significant positive correlation between the number of members online and the number of distinct posters.
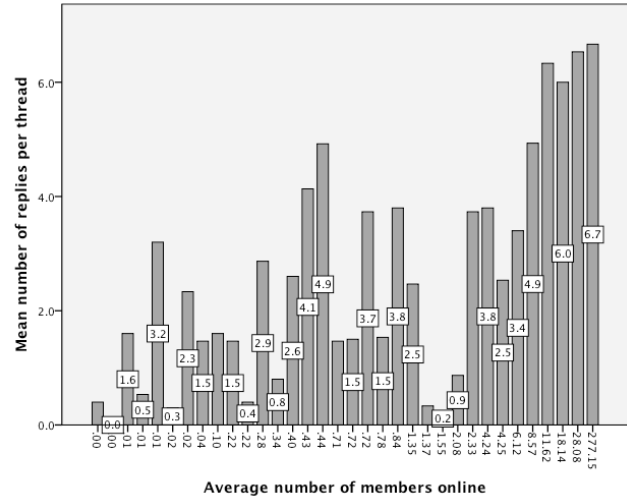

Figure 4: The number of average replies per initial post

Reply Quality

Reply Discipline

Figure 5 shows the percentage of on-topic and off-topic posts for each community. The data show that the vast majority of posts are related to the general topic of traveling; however, the data do not indicate a systematic increase of off-topic posts as the average number of community member increases. Our analysis of the measure "topical relationship with the initial post" shows a similar picture. Overall, the vast majority of the posts in our sample are related to the initial post. Even though the threads in forums with more online members tend to be longer, as shown previously, this does not lead to a systematically increased number of unrelated posts.

The Nature of the Initial Post

As we discussed earlier, the initial post does not necessarily have to be a question but can also be a comment. Figure 6 shows the results of our initial post categorization. The figure indicates that a considerable number of initial posts are not classified as questions but as comments. Overall, the number of questions (54%) is only slightly higher than the number of comments. These comments include initial

posts where the poster gives an opinion, shares an experience, a viewpoint, and/or an evaluation with no visible purpose of obtaining information. Of course, in the context of an online forum, information exchange is one of the main drivers, and almost any kind of action will trigger a release of information.
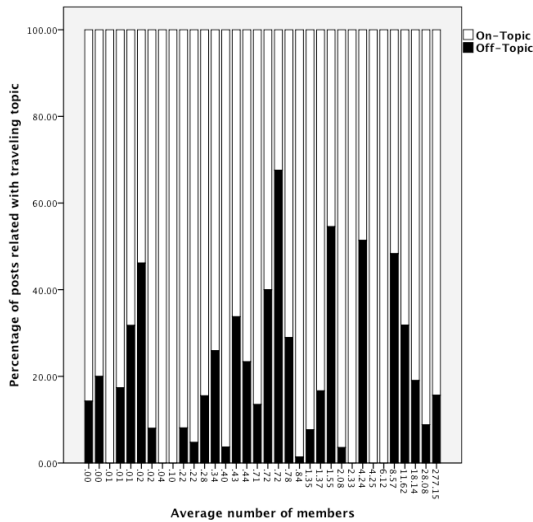

Figure 5: The percentage of On-Topic and Off-Topic posts for each community
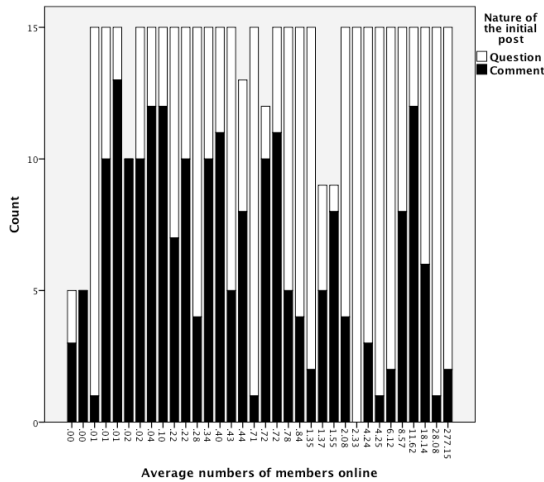

Figure 6: The number of questions as well as comments for the initial post

A review of the initial posts coded as comments depicts that in comparison to questions, comments can act as a social proxy for individual identification. For example, a user is sharing his/her travel experience in a very detailed and enthusiastic way in the form of a travel report or sharing pictures with brief texts.

Yet, not all comments were such a source of constructive information. Commercial activities and branding attempts were coded as comments, as some travel reports were implicitly commercially motivated or aimed at attracting consumers to certain destinations. Some of these underlying commercial posts were displayed as a mixture of personal comments and commercial purposes. For example, the initial poster comments on destinations for adventurous vacations included a link conducting the user to a commercial site. Still other comments included political discussions about certain destinations. As such issues are relevant for travelling trends, they usually receive a generous echo and become long threads.

As we analyze the distribution of comments across our community sample, we see that the number of comments tends to increase as the average number of members online decreases. Even though there are exceptions, most communities at the right end of the distribution have a higher share of questions in the form of initial posts, while the less active communities at the left-end of the distribution have a higher share of comments.

The Nature of the Replies

Figure 7 shows the results of our categorical system for the replies, indicating that the most common category is "explaining / answering," and the second most common category is "easy talk with no obvious informational value." The effects are not as strong as for the initial post, but the data show that the "easy talk" category is more common for less active communities than for highly active communities. Accordingly, we see a slightly higher share of "explaining / answering" in the forums with more online members.
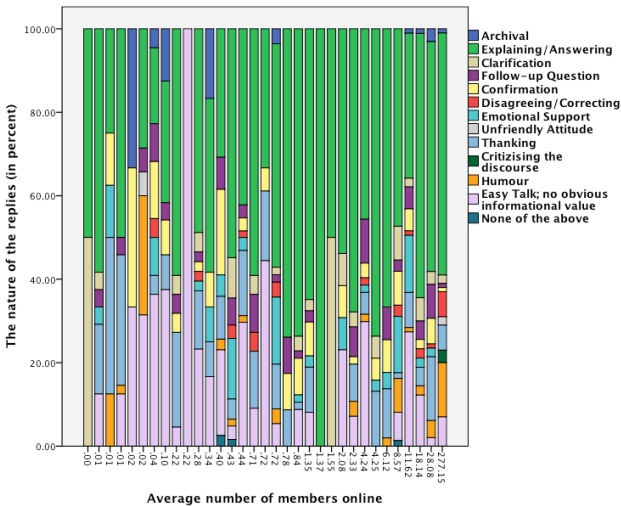

Figure 7: The categorization of the replies for each community in percentage.

DISCUSSION AND CONCLUSION

The Internet is turning more and more from a static repository into a platform that enables socialization and knowledge exchange among Web users. This creates a great potential to satisfy individual social as well as informational needs. However, this also creates heterogeneous landscapes of social exchange platforms that lack transparency for the user. Which platform is useful and what kind of information or discourse quality can be expected from a certain platform often remains obscure.

A systematic understanding and empirical research of this phenomenon requires a common understanding about concepts such as usefulness and quality that allow a systematic assessment and comparison of different platforms. To contribute to this scientific endeavor, we have proposed a concept of discourse quality for online forum communities. This conceptualization is modeled from the user perspective and includes quantitative as well as qualitative measures.

To demonstrate the usefulness and applicability of this measurement construct, we have researched the impact of membership size on discourse quality. Our evidence shows that although there are theoretically contradictory forces when forums grow larger, membership size does have a predictive power regarding our concept of discourse quality. The results can be summarized as follows: If the communities are very active (an average of 4 or more members who are simultaneously online), the reply quality measures can be expected to be on a high level.

For communities with fewer members online, the data is more heterogeneous. Some of the smaller communities reach similar reply quantities as the very large ones, while others show clearly insufficient discourse quality. Additional influencing variables have to be identified to improve the prediction of discourse quality, especially for those communities in the "long tail." Furthermore, our data show an emerging pattern indicating that the exchange-pattern in large communities differs when compared with smaller communities. Large communities have a higher share of question-answer pairs, while smaller communities show a higher share of "chit chat" that has no obvious informational value. This pattern could indicate self-enforcing loops: If the likelihood to receive useful replies is low in smaller communities, members tend to increase their socializing behavior, and thus incoming questions might receive fewer replies.

Regarding our concept of discourse quality, we see a contribution in the way that forum administrators can use this measurement construct for their internal quality management. Using a combination of different measurements (quantitative as well as qualitative), they would be able to target the weakest parts (e.g., by engaging moderators to improve the reply discipline). If measurement-constructs, such as the ones proposed, were accepted and used, this would lead to greater transparency of the online forum landscape for both administrators and users. High discourse quality could be used not only as a positive signal to attract users but also to negotiate with sponsors and advertisers.

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APPENDIX A:

The Codebook:

Reply Discipline

I) Travelling Topic

Definition and coding instructions: This variable measures whether the post is related to the topic of travelling. With this variable we investigate whether the community is seriously committed to the general purpose of the travelling and tourism domain or if the community is misused for other purposes (like sex advertisement, the selling of goods, insulting people or flaming (troll activity)).

1. On-Topic: The post talks about tourism and/or travelling. It is relevant to the objectives of travelling, the target groups are clearly related to tourism and/or travelling, and it is relevant to target audiences interested in tourism and/or travelling.

2. Off-Topic: The post is not related to tourism or travelling. For example, political discussions or discussions are about the culture but with no connection to travelling, and users do not express the intention of travelling; their comments and/or questions are not related to travel or tourism.

3. Socializing: Off topic, but helps to support the discussion (moderation) or general member support.

II) Relationships between Posts and Initial Post

1. Topical relationship with Initial Post: A post contains relevant information: when it answers the initial poster's question or refers to the initial poster's comment, when it gives information, clarifies or complements the initial

post's content, dealing specifically with the topic, geographic area, and/or subject of the previous post.

2. No topical relationship with Initial post: The post does not specifically approach the issues that arise in the initial post; it is incoherent, not traceable and bares no relationship with the initial post's theme in the broader sense.

III) Kind of Initial Post

1. Question: All posts in which the poster seeks information or data are written with the purpose of obtaining information, including for clarification purposes. The presence of a question mark can be a hint but is not obligatory. The poster might seek concrete information, prices, recommendations or support for an action. (Thus, this could be compared to an information pull act.) This is in relation to Zhu [24] who examined type I questions or information-seeking questions posed when information is missing, while type II questions or discussing questions are used to provide some kind of information, to seek opinions or to start a dialogue. Bullen [3] also operationalizes critical thinking and distinguishes between positive indicators: (a) focusing on a question, (b) analysing arguments, (c) asking and answering questions of clarification, and (d) defining terms and judging definitions; the author also identifies negative indicators as: (a) focusing on a question unrelated to the problem, (b) analyzing arguments inappropriately, (c) asking inappropriate or irrelevant questions, or (d) incorrectly answering questions of clarification and incorrectly defining terms and inappropriately judging definitions.

2. Comment: All posts in which the poster gives an opinion, shares an experience, a viewpoint, and evaluation with no visible purpose of obtaining information or data. (Thus, this could be compared to an information push act.) When examining the responses to the initial post, Henri [12] is particularly useful, as he uses a similar variable, but further distinguishes between a direct commentary (any statement taking up and pursuing an expressed idea, using direct reference) and an indirect commentary (any statement taking up and pursuing an expressed idea, but without referring to the original message).

3. Other: Posts that contain no clearly defined character. They cannot be identified as either question or comment.

IV) Kind of Reply

Definition and coding instructions: This variable is used to characterize the posts, know what kind of information or attitudes they contain. All of these reactions can either come from a person who replies to the Initial Poster (or some subsequent posting) or they can also come from the Initial Poster itself. Up to two codes can be selected for this variable. When more than two are applicable, the coder must choose the two most prominent aspects and code the most prominent first.

1. Archival function. The reply repeats, summarizes, integrates, and/or interprets information.

2. Explanatory function (Answering): The reply gives answers to the questions, explains an issue, gives information, contributes with ideas, and offers options.

3. Attempt to clarify: The reply seeks to clarify a previous aspect or the information need of the initial poster. This can include formulations such as "Did you mean…." Or "Can you provide more information about…"

4. Follow-up question: The reply contains mainly a follow-up question that develops out of previous discourse. It can either be posted by the Initial Poster or by another poster. In contrast to the code "attempt to clarify," this code refers to a reply with a question, inquiry or statement that conducts the discussion in a new direction or asks for further details on the already existing body of posts.

5. Confirmation: The reply confirms, supports, agrees with previous posts.

6. Disagreeing and correcting function: The reply expresses disagreement, disconformities, and controversy with respect to previous postings. It corrects someone, proves someone false, contradicts a previous post, and is not in favor of what was previously expressed.

7. Emotional Support / Empathy/ Friendly attitude: The reply contains mainly an emotional support. It encourages or cheers up a previous poster.

8. Unfriendly attitude: The poster might be making fun of something or someone, insulting.

9. Thanking: The poster thanks, expressed gratitude. Positive remarks about the forum discourse in general. This can also be posted by the Initial Poster or by any other poster.

10. Criticizing the discourse: General critique about the discourse. This can refer to the informational value of the discourse or can refer to social aspects of the discourse.

11. Offering excuses: The poster excuses herself for a comment or reaction.

12. Humor: The post contains humor, in a positive sense. The poster might be using funny words, providing amusement, or using irony.

13. Easy talk, general remarks to sustain conversation but with no obvious or visible informational value.

14. None of the above; please specify _____