

Different Voices, Similar Perspectives? “Useful” Reviews at the International Movie Database

Completed Research Paper

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ABSTRACT

Digital networked environments have enabled cross-border interactions, which can facilitate understanding and multiperspectivalism when participants’ opportunities to be heard by others are not limited by social or technical factors. We examine the International Movie Database, where people worldwide contribute movie ratings and reviews. An important feature of IMDb is its social voting mechanism, which serves as a gatekeeping process; participants vote as to whether or not reviews are “useful,” and the most useful reviews are predominately displayed. We question whether or not international voices are represented among these elite reviews, and whether they bring unique views that differ from domestic (U.S.) perspectives. We find that international contributions are among the best-rated reviews at rates we would expect. However, we find little evidence that these reviews differ from those written by locals, and question whether participants are really exposed to alternative views of popular movies, despite IMDb’s international character.

Keywords

Gatekeeping, information filtering, intercultural communication, knowledge repository, user-contributed content.

INTRODUCTION

In the early days of the Internet and its social applications, scholars were enthusiastic about their potential to break down communication barriers, including time, space, and even power differences between interlocutors. For instance, a common theme in early research on digital communities was the proposition that they might have a democratizing effect on society, by providing the average citizen with a means to express his or her thoughts and ideas, which the traditional mass media could not provide (e.g., Bimber, 1998; Rheingold, 1993). Of course, more recent research has revealed that many of the inequalities offline are often reproduced online as well, and that a number of sociotechnical factors might impede the voices of non-elite citizens from being heard (e.g., Dylko et al., 2012).

In a similar vein, researchers have discussed the increasing opportunities for international and cross-cultural communication, but have also noted limitations. For instance, McEwan and Sobre-Denton (2011) claimed that social media have provided increased opportunities for people to connect cross-culturally, and that many users engage in such interaction with the intent of becoming more cosmopolitan. Such users, through the process of building social capital across cultures, feel increased empathy for others that transcends their local ties. Smith Pfister and Soliz (2012) note that the new digital networked environments both potentially enable and constrain intercultural communication. On the one hand, in comparison to traditional mass media, gatekeepers such as editors do not have direct control over what is communicated publicly by individuals across cultures. However, on the other hand, they are quick to explain that such environments promote engagement cross-culturally only in cases where “surveillance does not limit topics and styles of communication” (p. 248).

In the current work, we study the International Movie Database¹ (IMDb), a popular source for information about movies, which features a repository of movie reviews contributed by people around the world. According to Alexa², IMDb.com is

¹ <http://www.imdb.com>

² <http://www.alexa.com/siteinfo/imdb.com> (accessed 5 May 2013).

currently ranked 50th worldwide in terms of site traffic, with 70% of its visitors being based outside of the U.S. IMDb provides a natural case study for examining our key research questions: Can international voices and perspectives find an audience in the context of an online space with Anglo-Saxon roots? Can they pass through IMDb’s gatekeeping processes? If so, do such voices bring something unique to the ongoing discourse surrounding a movie of interest?

As will be explained, unlike Smith Pfister and Soliz (2012), we do not examine “surveillance” as a factor that might impede intercultural communication at IMDb. Rather, we examine a technical feature of IMDb, its social voting mechanism, which uses feedback from users to determine the presentation order of reviews contributed about a particular movie. We view the IMDb as an open knowledge repository to which users around the world can contribute, and we view its social voting mechanism as its primary gatekeeping process. As previously noted by Dylko and colleagues (2012), participatory sites have the potential to democratize the flow of information. At the same time, even when users collectively control which contributions are the “best” or “most liked,” this process may prevent contributions with particular properties from gaining an audience (Otterbacher, 2011). Therefore, we investigate whether or not international participants’ contributions at IMDb manage to pass through this gatekeeping process.

Brief History of the IMDb

IMDb was founded in the United Kingdom by Col Needham.³ It was originally a Usenet group (rec.arts.movies) and its lists were made searchable by Needham in 1990. The community was reincarnated as a website in September 1993, and was eventually acquired by Jeff Bezos, the founder and CEO of online retail giant Amazon.com in 1998. Although IMDb is based in the U.S., it also hosts international sites, where contributors can write in other languages. Our study focuses on the main site where the lingua franca is English. We focus on this site since it is the oldest and most active, serving as a place for movie fans worldwide to share their views. In addition, it features movies that draw an international audience. To contrast, many of the regional sites feature movies that appeal to a narrower, more local audience.

Gatekeeping at IMDb: Filters and Social Voting Mechanism

The concept of information *gatekeeping* has its origin in the sociology of news; it describes how information flows from the point of inception (an event happening in the world), passes through an editorial process, and then is published, where it will be distributed to and accessed by the public (Entman, 2003). More recently, Dylko and colleagues (2012) applied the concept to the study of information flows at YouTube. They proposed that open information repositories such as YouTube provide the potential for the flow of information to be democratized – users may not only post their own videos, but also vote as to whether or not they “like” videos. In other words, rather than an editor or a site moderator, participants collectively determine what the most popular contributed content is, which the site then promotes.

Similar to YouTube’s “like” feature, IMDb participants critique one another’s movie reviews through social voting. As shown in Figure 1, readers leave feedback as to whether or not they found a review “useful.” To organize the collection of reviews about a given movie, which often comprise thousands of reviews, the interface uses several filters. This provides a way for participants to sort the reviews and select those appealing to their interests. Much previous research has demonstrated the necessity of structuring communications that are text-based, lest users suffer from information overload (e.g., Jones et al., 2004). As seen in Figure 1, the default filter is “Best, which sorts the reviews by the proportion of voters who found the movie “useful.” When a user visits the forum of a movie, he or she will see the 10 “best” reviews, as IMDb displays 10 reviews per page.

The social voting mechanism and the filter functions shape the unique nature of the interactive process in IMDb and make it an interesting place to observe intercultural communication. In addition, it provides an opportunity to examine, quite literally, how community participants value voices from a variety of cultures. We examine the first 20 “best” reviews (i.e., those displayed on the first two pages at a movie’s review forum). Previous research suggests that readers at IMDb will extensively rely on this voting mechanism to reduce the information overload that comes with being presented with many reviews about a movie of interest, and that they will actually read relatively few reviews (Otterbacher et al., 2011). Therefore, we focus on highly rated reviews in IMDb, reasoning that reviews displayed beyond the second page are less likely to enjoy attention from readers.

³ <http://www.imdb.com/features/15thanniversary/history>



Figure 1: Social voting feature on IMDb review page.

Research Questions

Issues such as which contributions are read by others and whether or not voices differ across cultures are naturally raised in intercultural digital spaces. Of course, in the case of IMDb, users’ reviews are comments on movies, which are cultural artifacts themselves. Given that IMDb is owned by an American company, and that the U.S. has a very active movie industry, we will examine whether or not U.S.-based participants dominate the discourse, contributing reviews that are voted as the “most useful,” by readers. In addition, we ask if international participants’ reviews differ from those of U.S. reviewers, with respect to their content.

Q1: Do reviewers based in the U.S. enjoy more prestige at IMDb, as compared to international reviewers?

Q2: Do top-rated reviews by international participants share similarities to those written by U.S. reviewers?

RELATED WORK

Many previous studies on intercultural computer-mediated communication (CMC) focus on whether cultural differences in the physical world affect CMC behaviors, or if the new digital environments allow for new cultural practices to develop. Here, we briefly review related literature, relating it to our study of the IMDb.

Do Cultural Differences Influence CMC?

Many researchers (e.g., Zakaria and Cogburn, 2007) assume that cultural differences in people’s communication practices will also apply to their interactions online. This assumption is based on basic intercultural theory, as purported by Edward T. Hall’s cultural framework (1976). Research taking this perspective draws conclusions about the impact of cultural differences on online intercultural communication. Such studies claim that an awareness of cultural differences can help reduce misunderstandings in communication, facilitating intercultural relations.

The difference between high and low-context cultures, in Hall’s description, depends on how much meaning is found in the context versus the code. Low-context cultures, including American and many Western European cultures, tend to place more meaning in the language and relatively little meaning in the context. For this reason, communication tends to be specific, explicit, and analytical, whereas communication in high-context cultures (e.g., East Asian, South American) tends to be less specific, direct, and more emotional (Ting-Toomey, 1985).

To understand cultural differences online, and to overcome conflicts, Zakaria and Cogburn (2007) applied Hall’s theory to the analysis of email messages from the UN World Summit on Information Society, where participants used email to interact, and had minimal face-to-face interaction. The authors found the communicative patterns in high-context emails were indirect and ambiguous while low-context communication was direct and concise. They suggested that regional differences can be predicted and are aligned with intercultural theory. Such previous work leads us to consider whether we will also find content differences between movie reviews written by authors in the U.S. and other world regions.

Can CMC Shape Cultural Practices?

On the other hand, many researchers do not accept that cultural differences automatically carry over to online settings, and treat the cultural practice in digital environments as an ongoing process. For instance, Hewling (2005) in a study of an intercultural online classroom, did not deny the value of associating culture with nation, but argued that it is also important to treat culture as an interactive process. Data in her study consisted of discussion board messages from two online classes and Blackboard auto-generated student tracking data. A content analysis suggested that individual differences were visible in terms of what participants said and to whom, but were not subsumed into a broader pattern of national culture as might have been predicted. Based on Hewling’s findings, we expect to see some differences between reviews written by U.S. and international reviewers, but we do not expect these differences to be generalized into a broad pattern of national culture.

Cassell and Tversky (2005) took the same view of culture as did Hewling, claiming that differences in communication patterns between cultures are likely to change over time. They questioned if one cultural voice will dominate when a group of people worldwide interact together online as a community. Their context was the Junior Summit 1998, an international online community that brought over 3,000 children from 139 countries together to discuss global issues, using a mailing list with a Web interface. They first divided the messages posted by children in English, studying the word frequencies used over a period of six months.

They observed that people from different cultures used language differently, but that their language patterns tended to converge over time with repeated interaction with the community. Likewise, in interviews, participants acknowledged an increased appreciation for diversity and developed the ability to see different perspectives. The researchers also applied content analysis on a subset of messages; however, the data set was too small to compare regional differences in communication patterns. Taking a similar approach, our study of IMDb reviews examines a larger and more diverse data set representing international participants, and we anticipate that there will be obvious content differences between contributions by U.S. and international reviewers.

DATA AND METHOD

To investigate whether international reviewers are heard and also whether these voices differ from those of U.S. reviewers in the context of highly rated reviews at IMDb, we employ a mixed-methods approach. Our data consists of the reviews contributed by users about movies that appear in IMDb’s Top 250 chart⁴. This is a list of movies receiving the best ratings from users at IMDb, and although it is a dynamic list, changes happen slowly over time, with many classic films persistently in the top ranks. Table 1 provides information on five movies on the list, in order to provide the reader with an idea of the variety of films it contains. As will be explained, we conducted our analysis in two phases, in order to address each of our research questions.

Rank	Title (year)	Mean user rating (0 to 10)	Total user ratings cast
1	The Shawshank Redemption (1994)	9.1	476,182
2	The Godfather (1972)	9.1	384,219
4	The Good, the Bad and the Ugly (1966)	8.9	144,349
7	12 Angry Men (1957)	8.8	105,896
15	Seven Samurai (1954)	8.7	90,196

Table 1. Example movies from IMDb’s Top 250 list.

Phase 1: Quantifying the share of contributions by international reviewers

The first part of our analysis is quantitative and considers the share of reviews contributed by U.S. versus international reviewers. We first considered the set of all reviews contributed about the top 250 movies, characterizing reviews with respect to the location of the reviewer. As shown in Figure 1, when reviewers provide their location, it is displayed along with their reviews. It is important to note that not all reviewers share their location and that, of course, we cannot verify the accuracy of the information reviewers provide. Following that, we considered the share of the *top* reviews (i.e., the top 20 reviews on each movie, ranked by “useful” votes cast by IMDb users) that are written by U.S. versus international reviewers, in order to address the question of whether international reviewers’ contributions pass through IMDb’s gatekeeping process.

⁴ <http://www.imdb.com/chart/top>

Phase 2: Content analysis of top reviews by U.S. and international reviewers

In the second phase, we conducted a deductive content analysis on a subset of the top reviews in our data set. We chose 10 movies from the top 250 list, each of which had at least one non-English language spoken in it, according to its page at the IMDb. The 10 movies considered were: *Amelie*, *Casablanca*, *Cinema Paradiso*, *City of God*, *Life is Beautiful*, *Pan’s Labyrinth*, *Schindler’s List*, *Seven Samurai*, *The Godfather*, and *The Pianist*. We reasoned that movies with an international element would likely attract more interest from international reviewers. Therefore, we wished to compare the content of reviews on these movies written by international versus U.S. reviewers, in order to see if the internationals might bring new perspectives to the attention of IMDb users. Specifically, for each of these 10 movies, we found the “best” (according to users’ votes) reviews, selecting the 10 best reviews by U.S. reviewers, and then the 10 best reviews by international⁵ reviewers. This process yielded a total of 200 reviews for content analysis.

Our coding scheme was inspired by a previous study that considered regional differences in an online international community (Cassell and Tversky, 2005). This study focused on two types of content categories: informative and interactive. In our work, “informative” content is that which conveys information, including a description of the movie or the disclosure of the reviewer’s personal experience, and/or the expression of opinion. “Interactive” means that the review is somehow addressing others, including attempts to argue with others or to make recommendations to them. Table 2 summarizes the specific attributes that were coded by our two independent judges, as well as the level of agreement between them, expressed as a Cohen’s Kappa and its relative p-value (Cohen, 1960). As noted in the table (with Y/N noted under the “Code” column), for four of the attributes, judges coded for the presence or absence of them in each of the reviews. For the remaining attributes, judges indicated to what extent the review discussed the attribute (not at all (N), a few details (F), more than a few details (M)).

			Code	Kappa	P-value
Informative	Expressing Opinion		Y/N	-0.0086	0.5700
	Mentioning Facts	General	N/F/M	0.2454	0.0000
		Technical details	N/F/M	0.3549	0.0000
		Storyline and theme	N/F/M	0.4230	0.0000
		Screenplay, writing	N/F/M	0.4695	0.0000
		Directing	N/F/M	0.5089	0.0000
		Acting	N/F/M	0.4468	0.0000
	Personal Experience	General	N/F/M	0.2184	0.0000
		Feeling of watching movie	N/F/M	0.0888	0.0070
		Impact on personal life	N/F/M	0.1223	0.0004
Mention nationality or bio		Y/N	0.3453	0.0000	
Interactive	Debating		Y/N	0.5626	0.0000
	Offering advice		Y/N	0.6138	0.0000

Table 2. Coding scheme for content analysis.

As shown, the judges achieved a statistically significant level of agreement on the coding tasks for all attributes, with the exception of “expressing opinion.” For this attribute, the judges’ level of agreement did not surpass that expected by chance,

⁵ We should clarify that *international reviewer* here means a reviewer whose location is a country where English is not a national or de facto language.

which was already extremely high. Nonetheless, we observe very high levels of agreement, and in the following analysis, we use the codes assigned by our first judge.

ANALYSIS

Quantifying the share of contributions by international reviewers

Table 3 summarizes the reviews in our data set, classifying reviewer location into one of four categories: U.S., another country in which English is the national or de facto language⁶, international, and unknown location. We reasoned that, because English is the lingua franca at IMDb, it would be prudent to separate out the reviewers who reside in a country where English is a national language, from other international reviewers.

Fortunately, most reviewers list their location, with only 11% withholding that information in the reviews in our data set. As would be expected, almost half of reviews in the data set were contributed by reviewers listing a U.S. location, while another 23% were contributed by reviewers listing another country where English is predominately spoken (e.g., Canada, the UK, Australia). As can be seen, 16.4% of the reviews in the data set were contributed by international reviewers.

The right side of Table 3 displays the distribution of reviewer location for the top 20 most useful reviews in our data set. A Chi square test of independence reveals that the proportion of reviews coming from each geographical region is not the same over the two sets of data (i.e., over all reviews versus those that have been rated as being the most "useful.")

As can be observed, reviewers from the U.S. and other English-language countries contributed the majority of these prestigious reviews. However, given that international reviewers over all make up only 16.4% of the population of users who reviewed at least one of the 250 movies in the data set, we can say that a share of 15.5% of the top reviews is only slightly less than what we would expect, although the difference is statistically significant.

	All Reviews		20 Most Useful Reviews	
	Count	%	Count	%
United States	79,746	49.3	2,509	50.2
Other English-language country	36,967	22.9	1,251	25.0
International	26,627	16.4	773	15.5
Unknown location	18,417	11.4	467	9.3
TOTAL	161,757		5,000	

Table 3. Distribution of contributions on top 250 movies at IMDb by reviewer location.

Content analysis of top reviews by U.S. and international reviewers

Tables 4 and 5 detail how many U.S. and international reviewers included each type of content in their reviews. Table 4 displays the frequencies of each type of content for the attributes coded as present or absent, while Table 5 compares the distributions of the other 9 attributes, for which judges rated the extent to which an attribute was discussed in reviews.

		U.S. Reviewers	International Reviewers
Informative	Expresses Opinion	0.99	1.0
	Mentions nationality or bio	0.14	0.08
Interactive	Offers advice	0.33	0.32
	Debates with others	0.20	0.19

Table 4. Proportion of reviews by U.S. and International reviewers that contained attribute.

⁶ http://en.wikipedia.org/wiki/English_language (accessed 5 May 2013).

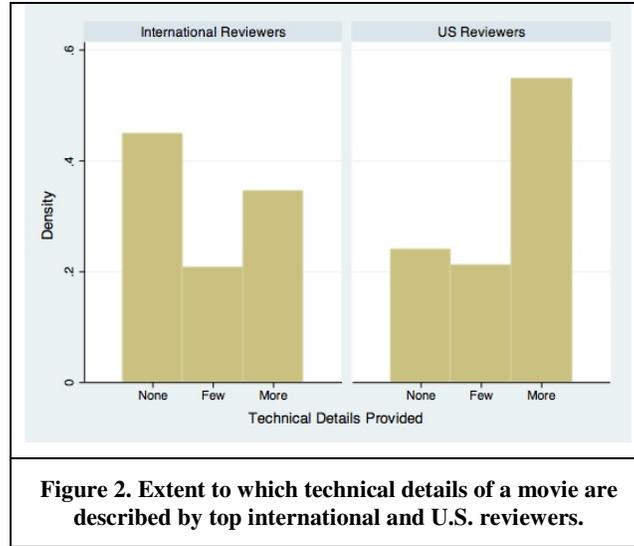
			U.S. Reviewers			International Reviewers		
			None	Few	More	None	Few	Many
Informative	Mentions facts	General	0.04	0.20	0.76	0.03	0.34	0.63
		Technical details*	0.25	0.22	0.53	0.41	0.20	0.39
		Storyline	0.08	0.17	0.75	0.10	0.15	0.75
		Screenplay / writing	0.55	0.15	0.30	0.55	0.19	0.26
		Directing	0.43	0.10	0.47	0.45	0.17	0.38
		Acting	0.23	0.18	0.59	0.21	0.26	0.53
	Personal experience	General	0.33	0.32	0.35	0.30	0.43	0.27
		Feeling of watching movie	0.14	0.36	0.50	0.16	0.33	0.51
		Impact on personal life	0.77	0.11	0.12	0.77	0.11	0.12

Table 5. Proportion of reviews by U.S. and International reviewers that discussed an attribute not at all, a few times, or more than a few times.

In summary, we observe the following trends regarding these most “useful” reviews:

- **Opinion:** Nearly all reviewers, regardless of location, directly and clearly state their opinion of the movie.
- **Facts:** While U.S. and international reviewers provide general facts about the movie at similar rates, U.S. reviewers tend to offer detailed technical facts as compared to internationals, as illustrated in Figure 2.
- **Personal information:** U.S. and international reviewers provide personal details in their movie reviews at similar rates.
- **Interaction:** U.S. and international reviewers “debate” with others and offer advice at strikingly similar rates.

Chi square tests of independence revealed that the international and U.S. reviewers’ contributions varied significantly only with respect to one content attribute, the provision of technical details about the film being reviewed. Table 6 presents example reviews that illustrate how reviewers mention technical facts in their reviews. As can be seen, we observed many cases where U.S. reviewers focused on providing a very detailed critique of a technical aspect of the movie (e.g., the musical score or the cinematography). Technical characteristics described by international reviewers are often of a more general nature, with less detail. Thus, it would appear that international reviewers are more likely to approach movie reviews in a more holistic manner, as compared to U.S. reviewers.



Movie	Reviewer country	Review
The Godfather	U.S.	“Less often mentioned is the consistently intriguing cinematography by Gordon Willis. Most of Willis’ unusual shots in the film are so subtle as to be barely noticeable unless you’re looking for them. The opening, for example, consists of a log (it lasts a few minutes) “zoom out”...”
	Peru	“It’s the kind of movie where everything is perfect. Everything. The acting, the script, the pacing, the cinematography, right down to the soundtrack. All of it.”
Amelie	U.S.	“The atmosphere is also supported by the magnificent music by Yann Tiersen who has composed 19 songs in 15 days for this movie. The principal motive appears in many variations somehow being joyful, yet at the same time sad – slow and sometimes fast and activating...”
	Brazil	“The direction and the acting are top notch, supported by awesome camera work and the cinematography, excellent edition and magnificent soundtrack.”

Table 6. Example reviews in which reviewers mention technical facts about the movie.

Reviews written by authors from high- versus low-context cultures

Having found only one significant difference in the content of reviews written by U.S. versus international reviewers, we questioned whether it might be more fruitful to compare across cultures rather than countries, using Hall’s (1976) distinction between high- and low-context cultures. Therefore, we re-sorted our 200 highly rated movie reviews by reviewer culture. Among the countries of reviewers in our data set, we noted seven low-context cultures (U.S., Germany, Netherlands, Sweden, Switzerland, Finland, and Denmark). This resulted in a set of 127 reviews from low-context cultures and 73 from high-context cultures (including reviewers from South America, Southeast Asia and the Mediterranean).

After coding each review for its authors’ respective culture, we then repeated the analysis detailed in the previous section, this time comparing the reviews written by authors from high- and low-context cultures. In this second analysis, we again detected only one statistically significant difference between the two groups. A Chi square test of independence revealed that low-context reviewers are more likely to debate with others, as compared to high-context reviewers, as illustrated in Figure 3. Table 7 presents examples of this attribute.

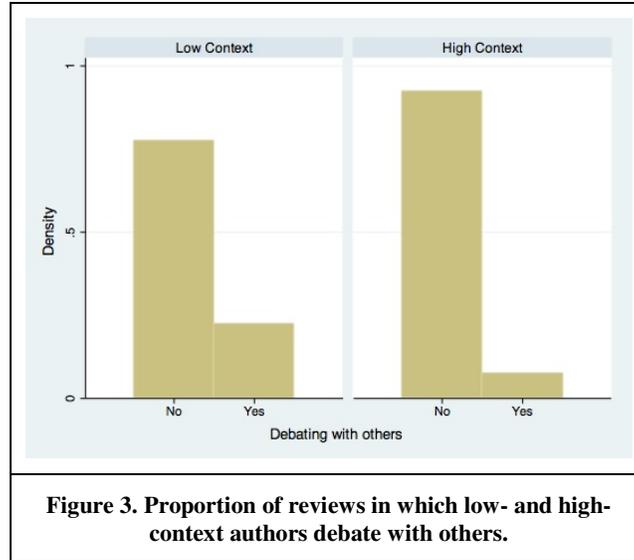


Figure 3. Proportion of reviews in which low- and high-context authors debate with others.

Movie	Reviewer country	Review
Life is Beautiful	U.S.	“Fortunately, my family didn’t experience the Holocaust, but I have read enough about it and seen enough pictures, that I can never understand how you cannot be offended by this movie. I think a lot of people don’t realize how wrong it is to trivialize the Holocaust, because it doesn’t seem real to them. Can anybody even imagine a comedy about 9/11? I didn’t think so.”
	Germany	“I’ve also seen people review this movie and say that it made light of the Holocaust, which was of course a dark point in history. I don’t think so; I think that it’s only delicately handled, and because of that, the movie is one that a person can watch in one sitting without being thoroughly disgusted by mankind.”
	China	“I find it sad that so many people are so narrow-minded that they will not watch a movie that is black and white or, in this case, is subtitled. I feel sorry for people who refuse to watch a movie like Life is Beautiful just because it is a foreign film. They have no idea what a beautifully acted and directed film this is, and they’ll never know what an amazing experience they are missing.”

Table 7. Example reviews in which reviewers debate with one another.

DISCUSSION

IMDb is an open knowledge repository allowing people around the world to share their views about movies of interest. Diverse voices from a variety of countries and cultures are active at IMDb, but do these voices find an audience? Do readers place value on contributions from voices that are not local?

Our results during the first phase of analysis showed, as we expected, that reviewers listing a geographical location in the U.S. contribute more than half of the top-ranked reviews at IMDb, with reviewers from other English-language countries contributing another quarter. To contrast, international reviewers’ share of these most prestigious reviews is only approximately 16%.

Because people rarely change the default filter settings or look beyond the top of a list of items presented to them in rank order (Lampe et al., 2007; Pan et al., 2007), it is important to consider which contributions make it through to the top ranks.

We considered the first two pages of reviews for a given movie, or the top 20 most useful reviews, as having passed through IMDb's gatekeeping process. These are the reviews most likely to be read and voted on again and again, whereas less "useful" reviews may remain buried, especially in cases where users encounter thousands of reviews of a given movie. We do observe that reviews by U.S. reviewers and those from English-speaking countries, are more likely than are international reviewers, to pass through this filter. However, taking into consideration that they make up a smaller part of the population of reviewers, we cannot conclude that their reviews are underrepresented in the set of top reviews.

As pointed out by Barzilai-Nahon (2009), traditional theories of gatekeeping, which tend to focus on the process of information *selection*, need an update in order to explain gatekeeping in the modern information society. In particular, she explains that networks and technology have enabled a wide variety of gatekeeping practices in addition to selection, such as adding on to information, and channelling, shaping and repeating it. In the case of IMDb, it is worth considering the alternative paths to information that users may have available to them. While the "best/useful" filter determines the default display of movie reviews, users may also seek out the contributions of users with specific demographic characteristics (e.g., country, gender), or those with particular content characteristics (e.g., reviews expressing a "love" or "hate" opinion of the movie). In short, the information gatekeeping process is likely to be more complicated in social computing contexts such as the IMDb, and this needs to be considered in future work.

Diversity in review content

Perhaps a more surprising result was that we detected few differences in the content of the top reviews written by international reviewers, as compared to those in the U.S. This result contrasts with the assumption that people from different countries and cultures will express themselves differently (Zakaria and Cogburn, 2007), bringing new perspectives to IMDb participants. On the other hand, our results resonate with previous studies that have proposed that culture, on its own, is not an effective predictor of online behavior, and that other factors above and beyond a reviewer's culture will influence her communication practices (Hewling, 2005).

For instance, participants' communication style might be influenced by the culture of IMDb itself, as designed by its creators and shaped by its participants. Since IMDb is owned by an American company, the design of the site's features embody the cultural values of its creators to promote quick, open, informative and interactive communication (Reeder et al., 2004). U.S. reviewers might be more comfortable to disclose their opinions and to dominate the movie forums in this environment, with others mimicking their style of communication.

International reviewers, using English at the IMDb, write using similar content features as compared to their U.S. counterparts. Previous studies have found that people may contribute different content when they write in their own languages versus another language (Callahan and Herring, 2011; Fukuhara, 2008). Others have noted that the use of English as the lingua franca at an international community means that international members are likely to be highly educated, excluding those who cannot communicate effectively in a second language (Darling-Wolf, 2004). In other words, language likely plays a key role in raising cultural awareness and suggests the importance of keeping multiple languages of the IMDb.

CONCLUSION

The results of our study recall the concern that having the opportunity to speak does not necessarily mean that one will be heard. In order for new digital environments to facilitate cross-cultural understanding and the development of multiperspectivism, interlocutors' ability to express themselves needs to be unconstrained by social and technical factors (Smith Pfister and Soliz, 2012). We have examined how the social voting mechanism and its "most useful" review filter, serves as a gatekeeping process at IMDb, and found that, primarily voices from the U.S. are heard.

This result was not entirely unexpected, given the relative participation rates of U.S. residents, those from other English-speaking countries, and international users. Our results illustrate the need for further research into the dynamics of open knowledge repositories that use social voting mechanisms in their information displays. While users collectively are in control of the gatekeeping processes at IMDb, it is not clear who does the voting (i.e., do the majority of participants participate in voting?) and/or whose information preferences are therefore represented by the most "useful" reviews.

Our findings also have implications more generally for the developers of knowledge repositories that are intended to facilitate sharing across borders and cultures. How can we encourage truly different voices to participate? How can we ensure that their originality is highlighted, such that readers can appreciate the diversity of voices and differences across cultures? Answering such questions might lead to new networked digital environments that truly provide neutral spaces for participants to engage one other and to share multiple perspectives.

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