

Crowdsourcing the mainstream. An analysis of the most frequently posted links on Facebook¹



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ABSTRACT: The article aims at investigating whether link-posting of Facebook users results in reproducing the hegemony of corporate-led mainstream cultural productions. A detailed analysis of 103 links shared 16,735 times by 6,344 Facebook users is presented. The following research finds that although a vast majority of the most often posted links points to corporate content, especially music videos, the proliferative power of Facebook enables some user-generated content to become enormously popular. This user-generated content represents mainly the ideas contrary to the ones dominating mainstream media. Links of this kind are more likely to be shared by older users. The reproduction of the corporate mainstream on Facebook is primarily due to female users, younger ones, users who inhabit larger cities, who have fewer friends, and are less culturally competent. Further analysis suggests that posting links to mainstream content may serve as a strategy of social compensation.

KEYWORDS: social networking sites, cultural hegemony, social compensation hypothesis, mainstream, media, Facebook



INTRODUCTION

It is often argued that Internet tools, such as social networking sites (SNSs), let individuals acquire a new creative autonomy (Castells, 2009), inhabit cultural niches (Anderson, 2008), become a part of the participatory culture (Jenkins, 2006), and exercise agency (Stiegler, 2006). These ideas suggest that the hegemonic thought of the majority can be challenged within this extremely proliferative environment. The aim of the present article is to investigate whether links shared by Facebook users reproduce the hegemony of the corporate-led mainstream cultural productions

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or create a space for popularizing alternative productions, and thus facilitate sub-cultural and countercultural perspectives.

This problem is approached here from two angles: (1) the producer of the content (user-generated versus non-user-generated), and (2) the popularity of the content (since all the studied links point to YouTube.com videos, the popularity of the links is determined by the number of views as reported by YouTube). The following study does not question the existence of cultural niches on SNSs. These niches exist but they are not the subject matter of this research. The question posed here is: Do some of these niches break through to the mainstream?

User-generated content (UGC) is defined following the criteria offered by OECD's Committee for Information, Computer and Communications Policy. UGC, then, is defined as: i) "content made publicly available over the Internet, ii) which reflects a certain amount of creative effort, and iii) which is created outside of professional routines and practices" (OECD, 2007, p. 4). Thus, any content which is not identifiable as created by a company, and is not related to any commercial activity of its creator is considered to be user-generated. Commercial content, whenever creatively remixed by an individual without any visible commercial purposes, is also considered to be user-generated.

The notion of mainstream encapsulates the idea that the dominant group pressures minority identities to assimilate with the larger whole (Kama, 2000; Hall, Whannel, 1964). In the tradition of cultural studies, a wide range of media productions were considered as providing materials for (not necessarily mainstream) identity building and, as a result, for social reproduction and change (Kellner, 2003). Recent changes to the media landscape re-open the question of what it means to be mainstream, and whether the coercive measures of mainstream media weaken (Downing, 2003; Newman, 2009; Wallsten, 2010). First of all, technological progress has enabled the culture of remix (Lessig, 2008): consumers of cultural goods have received new creative opportunities. This leads to two research questions:

RQ1. To what extent is Facebook mainstream populated by links pointing to user-generated content?

RQ2. What types of individuals are more likely to link to user-generated content?

In the present article, the links appertaining to Facebook's mainstream were determined by their popularity. In a sample of 14,476 Facebook users, the most often shared links were counted. Thus, a sample of 6,344 users who contributed to making some of the links most popular, has emerged. These users shared 103 most popular links 16,735 times in total. The boundary between the mainstream and the non-mainstream links was arbitrarily set at 100. This means that a link has had to be shared by at least 100 users to be considered mainstream. As a result, each of these 103 most popular links has been shared by at least 100 users.

Given the relatively small sample size (as compared to the population of Facebook users), there was a risk that setting this threshold at a lower value would result in including some niche links in the analysis. For example, if the sample contained a strong

community of users who share some obscure interests, their activity could affect the list of mainstream links by positioning some niche links on the list. A basic content analysis of the selected links suggests that this has not happened. On the other hand, setting this threshold at a higher value would result in limiting the number of links under study.

Although, in this article, the set of mainstream Facebook links is precisely specified, the notion of “Facebook’s mainstream” is generally vague. First of all, there are many mainstreams on Facebook. A basic distinction in this regard should incorporate national demarcations. It is possible to distinguish Polish mainstream, Irish mainstream, Czech mainstream or any other national mainstream content. Thus, even if the popularity of links is agreed to be the major indicator of belonging to the mainstream on Facebook, such contextual variables as the link posters’ nationality should be taken into account. Here, a representation of the Polish mainstream content is studied. Thus, any reference to “Facebook’s mainstream content” in this article should be understood in the narrow sense as it is limited almost entirely to Polish Facebook users. It is nevertheless interesting to observe to what extent the Polish mainstream is influenced by the English-language content and cultural phenomena of the global scope, regardless of the language. This matter will be discussed further in the *Results* section.

Second of all, the advent of services such as SNSs has created the space where country-wide (if not global) popularity of cultural phenomena can be established collectively, without any intermediation of the traditional media. This leads to the third research question:

RQ3. What types of individuals are more likely to link to the less popular (i.e. non-mainstream) content?

The title of this article contains an assumption that the mainstream can be constructed in a crowdsourcing manner. The idea of “crowdsourcing the mainstream” is based on the feature of SNSs which enables the users to establish popular recognition of particular cultural phenomena without the mediation of the old media institutions. Some classical definitions of crowdsourcing assume that it is “an online, distributed problem-solving and production model” (Brabham, 2008, p. 75). Here, the emergent property of collective, usually unsynchronized and unsupervised action of large numbers of users is stressed. Thus, the idea of crowdsourcing the mainstream refers to the distributed production of social perception of what is popular and acceptable, and what is not. Contrary to some definitions of crowdsourcing, this approach does not assume that a function once performed by employees of a company or an institution is being mindfully and purposefully outsourced to an undefined network of people (see: Howe, 2006). Contrarily, it is assumed that in this case, the proliferation of SNSs has caused an unexpected emergence of masses of cultural curators who collectively started to produce cultural and social meaning, partially replacing institutional hegemonists in this field. The notion of “crowdsourcing the mainstream” opposes the old media model of manufacturing

the mainstream in which the power to decide what is mainstream and what is not is held by a small number of actors such as media institutions and creative industry companies.

The article proceeds as follows. The *Method* section describes data collection and sampling procedures, as well as the independent and dependent variables. The *Results* section provides a brief description of statistical analyses, and the *Discussion* section contains theoretical implications of the study. The article ends with an overview of the limitations of the current study. The following analysis was conducted with Python programming language as the basic data processing tool and SPSS as the basic statistical package. The charts presented in the paper were generated with the use of R language.

METHOD

Data collection and sampling

The collection of data was carried out by the use of a Facebook analytics application designed to provide its users with statistics about their and their friends' activities. All the collected data was gathered through the Facebook application framework. Using this framework guaranteed that the users control the access to their data through privacy settings and authorization procedures (see: Facebook, 2013). The users have been informed that the data they provide will be used for scientific purposes, and that they can opt out of the study in any given moment with all their data being erased within 24 hours. Since the users were also providing the data that their friends shared with them, it is important to notice that the only data gathered is the data that the users' friends agreed to share with applications run by their Facebook friends.

Moreover, the application uses a wide range of anonymizing procedures, both in terms of the information provided by the users (e.g. surnames, phone numbers), as well as in terms of the data provided by Facebook Graph API (e.g. identification numbers of objects such as photos). Consequently, a significant amount of effort is needed to identify a Facebook user using the data collected by this application. The gathered data was additionally cleaned in order to omit non-individual profiles (e.g. profiles representing various institutions, music bands, etc.) and profiles with inconsistent data (e.g. the Birthday field not corresponding to the data presented in the Education or Work fields of the user's profile).

The data was collected between January and April 2013. Even though Facebook users vary in terms of when they have started sharing links on Facebook, the links identified as the most popular ones were uploaded on YouTube almost exclusively during the last three years, and thus could not have been shared on Facebook at any time before 2010. This corresponds to the dynamics of Facebook usage in Poland.

While in June 2009, 1.3 million Poles were using Facebook, this number grew up to 6.4 million a year later (Polskie Radio, 2010).

The 67 participants of this study provided data that 14,409 users agreed to share with the applications run by their friends. Thus, a sample of 14,476 users has emerged (14,409 + 67). This sample consisted predominantly of Polish Facebook users (81.2%). Out of these 14,476 users, 11,817 shared at least a single link. In sum, these 11,817 individuals shared a total of 3,084,734 links (including repetitions). Next, the frequencies of appearance were calculated for every single link. The links shared by fewer than 100 users were dropped from further investigation. As a result, a list of 114 most often shared links has appeared. Almost all of these links were links to YouTube.com videos. Only seven links pointed to non-YouTube content, and four remaining links pointed to already non-existent videos. These links were dropped and a final list of 103 most popular links to YouTube.com videos has emerged. Out of the original 11,817 link posters, 6,344 shared at least a single link out of these 103 most popular links. Therefore, the following study concerns 6,344 users who shared at least one of the 103 links identified as the most popular ones. In sum, these links were shared 16,735 times by the studied sample of users. The differences between these three samples (the initial sample, the sample of people who posted at least a single link, and a sample of people who posted at least one link categorized as a mainstream link) are presented in Table 1.

Table 1. A comparison of the measures between a full sample of users ($N = 14,476$), a sample of users who shared at least a single link ($N = 11,817$), and a sample of users who shared at least a single link identified as one of the 114 most popular links ($N = 6,344$)

Measure			Sample size		
			14,476	11,817	6,344
1.	% of females		46.60	45.10	47.57
2.	Age	Mean	32.04 ($N = 7,909$)	32.16 ($N = 7,001$)	29.94 ($N = 3,691$)
		SD	11.477	11.201	7.950
3.	Location size	Median	4.00 ($N = 6,694$)	3.00 ($N = 6,107$)	3.00 ($N = 3,764$)
4.	Number of friends	Mean	304.49 ($N = 12,317$)	337.06 ($N = 10,238$)	313.22 ($N = 5,356$)
		SD	484.897	514.510	396.788
5.	Cultural competencies	Mean	34.65 ($N = 12,179$)	36.33 ($N = 11,035$)	46.04 ($N = 5,994$)
		SD	25.827	25.614	26.132
6.	Facebook skills	Mean	11.79 ($N = 13,468$)	12.94 ($N = 10,998$)	14.12 ($N = 5,825$)
		SD	5.178	4.740	4.789

Note: Since users usually do not provide full information, the missing data was omitted when counting means and standard deviations (or a median for location size which is measured on an ordinal scale) for the discussed measures. Sample sizes in parentheses represent real numbers of the users included in the calculations.

Source: research data.

Unit of analysis

It is important to notice that in this particular study a single link is a unit of analysis. For every link the average measures listed below as independent variables (e.g. the average age of posters is calculated individually for every link under study) are calculated and then subjected to further analysis.

Independent variables

Average age. The age value was calculated by transforming the “birthday” variable from the users’ profile data. Due to privacy reasons, users under 18 years of age were excluded from the study. Also, users who declared their age as 80 or older were excluded from the study due to the practice of overstating of age by some users. As a result, the youngest users in the sample were 18 years old, and the oldest one was 74 years old.

Fraction of males. Since gender is a dichotomous variable, for every link a fraction of males among the link posters is calculated. For example, if a link is shared by 0.2 fraction of males, this means that 80% of the link posters were female.

Average location size. The location size variable was created by matching the names of the locations as provided by the users with a list of Polish villages and cities ordered by number of inhabitants. This variable is measured on the following ordinal scale: 1 — a city of 500,000+ inhabitants, 2 — a city of 400,000–499,999 inhabitants, 3 — a city of 300,000–399,999 inhabitants, 4 — a city of 200,000–299,999 inhabitants, 5 — a city of 100,000–199,999 inhabitants, 6 — a city of fewer than 100,000 inhabitants, 7 — a village. It is important to notice that, even though the location size is measured on the ordinal scale, it is used for calculating the means. In this particular case, the intervals between the rankings are clearly defined and relatively easy to interpret, and thus means were calculated.

Average number of friends. The number of friends is being estimated based on friending reports (i.e. “X. is now friends with Y.”) found in the users’ feed streams. Thus, it may be either underestimated (if the users hide their past feed stream), accurate or overestimated (if the users unfriend much, because there are no reports about unfriending other users). The obtained values, when compared to other statistics of the average number of Facebook friends, suggest that this measure is reliable, and that cases of underestimation or overestimation of the number of Facebook friends do not significantly impact the results.

Average Facebook skills index. Based on a predefined list of 30 Facebook activities (e.g. liking, commenting, sharing, creating an event, going to an event, clipping an offer, playing games, using apps, editing fields in the profile, inviting, rating, adding photos, subscribing, listing family members, recommending, etc.), the diversity of users’ activities was estimated. It is important to notice, though, that private messaging and chatting are not covered by this scale as these activities leave no trace in the gathered data. Also, the activity of posting links was excluded from this measure.

Average cultural competencies index. The “cultural competencies index” variable was estimated based on the users’ fan-page likes. Each fan-page has a category assigned to it. An exhaustive list of 206 categories was first created based on the users’ fan-page likes. Next, each user’s fan-page likes were processed in order to assess how diverse they are. Thus, a user with 206 fan-page likes, each fan-page in a different category, would score the highest on the cultural competencies scale, while a user with 1500 likes, all of them in a single category (be it *Society & culture* website or *Sport*), would score the lowest on the cultural competencies scale (assuming that the user has liked at least a single page). Similarly to the Facebook skills scale, the cultural competencies scale measures the diversity of the user’s interests/skills, and not its intensity.

DEPENDENT VARIABLES

Producer of content. A dichotomous variable. The two possible values are: *user-generated content* (UGC) and *non-user-generated content* (non-UGC). User-generated content is defined as any content which is not identifiable as created by any company, regardless of its size, and is not related to commercial activity of its creator. Moreover, content which is creatively remixed by an individual without any visible commercial purposes is considered to be user-generated.

YouTube.com views. Since the final list of links consisted only of links to YouTube videos, it was possible to estimate the popularity of links through the number of views provided by YouTube. It is assumed that the popularity of videos on YouTube.com indicates whether a particular video belongs to the (global or national) cultural mainstream. Data from YouTube was downloaded on 23rd of April 2013. This variable was then ranked. The smallest number of views was ranked as 1, and the largest as 103. The least popular video had 114,913 views and the most popular one — 1,554,347,294 views. It is important to keep in mind that in this paper two measures of link popularity are used. First of all, the number of times the links were shared by the sample users on Facebook is taken into account. This is a criterion for belonging to Facebook’s mainstream. On the other hand, the measure of YouTube.com views is taken into consideration. It is assumed that this measure reflects the overall popularity of a link. In other words, this measure guarantees that the studied links are not niche.

RESULTS

The producer of content

Out of the 103 links under study, 95 (92.2%) pointed to non-user-generated content (i.e. corporate content). This finding suggests that link-sharing actions of Facebook users contribute mostly to the reproduction of the corporate-led mainstream. A closer look at the data shows that among the top 25 links on the list of the most often shared links only one pointed to user-generated content. This link, listed in 24th place, pointed to

an anti-ACTA video. This Polish language video has been watched more than 2.3 million times on YouTube.com. Within the sample of 6,344 users, 195 individuals shared this link (the most often shared link was posted by 730 individual users). Out of the 8 UGC links, two pointed to anti-ACTA content, two to anti-government content, one to a citizen video of National Independence Day celebrations, one to a remixed song, one to a song performed by a young girl, and the last one to a remixed video of two supporters who ran onto a football pitch when the game was canceled due to heavy rain. To sum up, five out of these eight links pointed to videos carrying clear political meaning. Among these five videos, the two most popular — in terms of YouTube.com views — were the anti-ACTA records (2.3 and 1.0 million of views, accordingly). The three remaining political videos received 609,147 views or fewer (but not fewer than 356,960). Out of these eight UGC videos, only one involved multinational viral video (with more than 25 million views on YouTube.com). Except for this link, the remaining 7 UGC mainstream links refer to Polish language content or affairs related to Poland. It not only proves the existence of national mainstreams within Facebook, but — at least in the case of the Polish Facebook mainstream — shows the dominance of local user-generated content as compared to globally viral content.

The links to the non-user-generated content pointed mostly to music videos (80 out of 95 links, 84.2%). Out of the remaining 15 links, 8 pointed to social campaigns (e.g. a campaign against animal cruelty; a campaign inviting to civic engagement, etc.) and promotional links (e.g. videos promoting Polish cities, such as Warsaw or Toruń, and videos promoting events such as the Euro 2012 game between Poland and the Czech Republic). The next three links pointed to commercials, the next two links to political content, and the last two links pointed to entertainment videos.

Interestingly, the 3rd position on the list of the most often shared links was occupied by a link pointing to a video from a Polish social campaign against animal cruelty. This witty video featuring famous movie actors has been shared by 360 unique users in a sample of 6,344 individuals and received more than 3.1 million views on YouTube.com. The other top 3 videos received more than 394 million and 149 million views, accordingly. The difference in the number of views signals the gap between national and global cultural phenomena.

Content producer and users' characteristics

Links pointing to user-generated content are more likely to be posted by males ($r = .362, p < .01$), older users ($r = .383, p < .01$), inhabitants of smaller locations ($r = .210, p < .05$), users with a higher number of friends ($r = .326, p < .01$) and users with higher cultural competencies ($r = .269, p < .01$). The correlation coefficient for average Facebook skills (variable 5) is not statistically significant ($r = .119, n.s.$). It is important to notice that the "Average location size" is an ordinal scale variable with seven values possible (see: the *Method* section), and the larger the value, the smaller the location.

Every single link out of the 8 UGC links has been posted more often by males than females. As further investigation has shown, non-music videos (both UGC and non-UGC) are shared more often by males than females. In other words, Facebook's mainstream content other than music becomes popular mostly due to the actions carried out by men. Out of 21 non-music videos (both UGC and non-UGC), 19 were shared more often by males than females. For example, 69.89% of the users who shared the above-mentioned social campaign video against animal cruelty were males. Since women are less likely to abuse animals (see: Miller, Knutson, 1997), it could be expected that they will also outweigh men in propagating such anti-abuse videos. In this case it did not happen. This could be explained by the contents of the video. In Polish slang, the word "pies" ("dog") refers not only to a dog, but also to a policeman, and the video depicts a few gangsters holding a policeman and listening to their boss who is edifying them that it is not good to hurt a dog. This message appeals to men and, as it turns out, men share it with one another. Moreover, women tend to link to non-Polish content more often than men. Out of 27 Polish music videos, only 7 were more often linked to by females than by males. Moreover, out of 55 non-Polish music videos, 44 were more often linked to by females than by males.

A study carried out in Norway showed that older adults, more often than younger users, participate in user-generated content sites in order to express themselves politically (Karahasanović et al., 2009). It suggests, then, that the average age of users who posted links on political matters should be higher than the average age of users who posted non-political user-generated content. A detailed analysis of the eight UGC links shows that five links concerning political matters were indeed posted by, on average, older users. The two anti-ACTA links were posted by users whose average age was 32.40 (SD = 9.62) and 35.82 (SD = 8.88). The three following links were posted by users aged: 38.05 (SD = 13.24), 41.84 (SD = 11.83) and 42.83 (SD = 11.67). The three non-political links were posted by users whose average age was 27.20 (SD = 4.45), 28.65 (SD = 5.23), and 30.61 (SD = 7.31) respectively. This suggests that the findings of Karahasanović et al. are also applicable to Polish Facebook users.

Given that the "cultural competencies" variable is based on the broadness of the users' interests, as measured by liking Facebook fan-pages of various categories, the correlation between this variable and the likeliness of posting links to UGC content is not surprising. The users who like fan pages of diversified categories are more likely to encounter various types of content and share it with others. Similarly, users with larger numbers of friends are more likely to share UGC content. A possible explanation is that the more friends a user has, the more possible it is that a few friends will share the same link, creating a sense of its popularity, and thus stimulate the user to share the link, too.

Table 2 presents intercorrelation coefficients between the independent variables (variables 1 to 6), along with correlation coefficients between the independent variables and the "producer of content" variable (variable 7).

Table 2. Correlation matrix for the independent variables (1–6) and the dependent variable “producer of content” (7).

Measure		1.	2.	3. †	4.	5.	6.
1.	Fraction of males	—					
2.	Average age	.391**	—				
3.	Average location size (ordinal scale) †	.183	-.014	—			
4.	Average number of friends	.560**	.512**	.061	—		
5.	Average Facebook skills index	.559**	.117	-.368**	.439**	—	
6.	Average cultural compe- tencies index	.332**	.389**	-.359**	.420**	.562**	—
7.	Producer of content	.362**	.383**	.210*	.326**	.119	.269**

Note: N = 103. † — Spearman's Rho(r_s). In all the remaining cases Pearson's r was used. * $-p < .05$; ** $-p < .01$.
Source: research data.

Box plots demonstrating the relationships between users' average characteristics (associated with analyzed links) and the “Producer of content” variable are

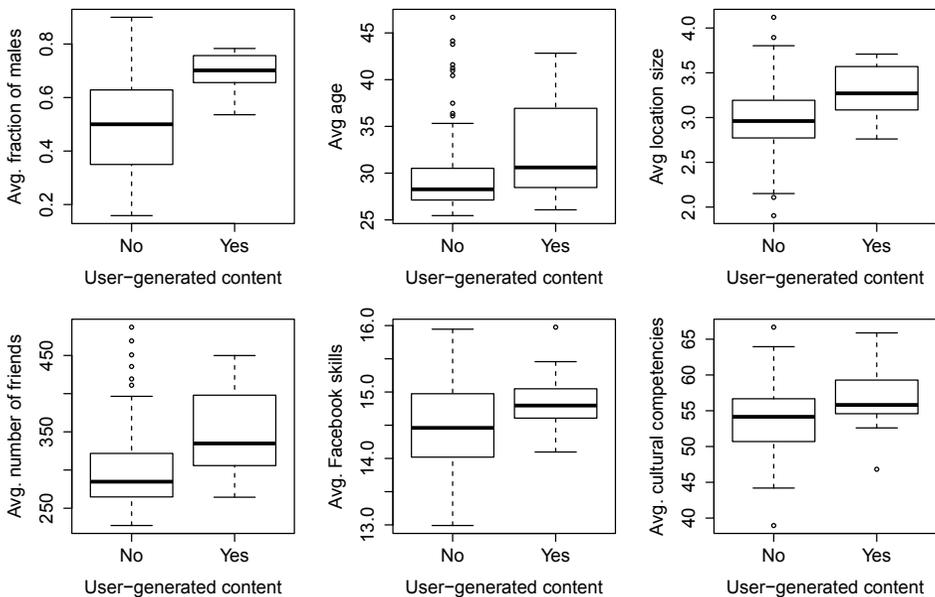


Figure 1. Box plots for users' characteristics and the “Producer of content” variable

Note: N = 103.

Source: research data.

presented on Figure 1. As mentioned above, a single dot (in this case only outlier observations are represented as dots) represents one of the 103 links under study. For example, on the top-middle plot (“Avg age” on y axis) there is a single non-UGC link with the average age of users who posted this link higher than 45.

Link popularity and users' characteristics

Links pointing to highly popular content (in terms of YouTube.com views) are less likely to be posted by males ($r = -.534, p < .01$), less likely to be posted by older users ($r = -.498, p < .01$), less likely to be posted by users with larger number of friends ($r = -.414, p < .01$), less likely to be posted by users with higher Facebook skills ($r = -.511, p < .01$), and less likely to be posted by users with higher cultural competencies ($r = -.317, p < .01$). The correlation coefficient for average location size (variable 3) is not statistically significant ($r_s = .043, n.s.$).

This suggests that posting links to extremely popular content may serve as a strategy of social compensation as users with a smaller number of friends, less culturally competent and technically skilled turn to this type of content more often. Further analysis of the data showed that the more popular the link (in terms of YouTube views) is, the more likes and comments the link poster receives ($r_s = .528, p < .01$). This suggests that socially disadvantaged users may link to enormously popular content in order to receive social feedback. The previous research has shown that Facebook use is motivated by two primary needs: (1) the need to belong and (2) the need for self-presentation (Nadkarni, Hofmann, 2011). The research of Baek et al examined motivations of 217 individuals for sharing links on Facebook and confirmed that posting links serves both these needs (Baek et al., 2011). It is an act of self-presentation as posted links manifest the user's interests, taste and views, and it may also contribute to the individual's sense of belonging once the social feedback (i.e. likes and comments) is received. This matter is further discussed in the next section.

The relation between age and the YouTube.com popularity of a video shows that older people do not link to the highly popular videos. Ranking the videos by YouTube.com views results in gathering all the globally viral videos at the top of the list. As Figure 2 (second plot in the first row) shows, people older than 35 do not link to this kind of content at all. These most popular videos are exclusively non-UGC: the top 45 links pointed to corporate-led productions (44 music videos and 1 commercial advertisement). In other words, the reproduction of the corporate-led mainstream productions is due to young users with certain characteristics, as described above.

The relation between gender and the YouTube.com popularity of a video suggests that women prefer to share socially established content, while men more often risk sharing less popular and less acknowledged content.

Table 3 presents intercorrelation coefficients between the independent variables (variables 1 to 6), along with correlation coefficients between the independent variables and the “YouTube.com views (ranked)” variable (variable 7). Scatter plots

demonstrating the relationships between users' average characteristics (associated with analyzed links) and the ranked values of "YouTube views" variable are presented in Figure 2.

Table 3. Correlation matrix for the independent variables (1–6) and the dependent variable "YouTube views (ranked)" (7)

Measure		1.	2.	3. †	4.	5.	6.
1.	Fraction of males	–					
2.	Average age	.391**	–				
3.	Average location size (ordinal scale) †	.183	–.014	–			
4.	Average number of friends	.560**	.512**	.061	–		
5.	Average Facebook skills index	.559**	.117	–.368**	.439**	–	
6.	Average cultural competencies index	.332**	.389**	–.359**	.420**	.562**	–
7.	YouTube views (ranked)	–.534**	–.498**	.043	–.414**	–.511**	–.317**

Note: N = 103. † — Spearman's Rho (r_s). In all the remaining cases Pearson's r was used. * – $p < .05$; ** – $p < .01$

Source: research data.

Even though some user-generated content made it to the Facebook mainstream, it is important to notice that this kind of content cannot compete with non-user-generated content in terms of YouTube.com views. This applies even after filtering out content of global reach and focusing only on videos of Polish origin. Out of the 103 links under study, 46 represent videos of Polish origin; 7 of these links represent user-generated content. The median number of views for 39 Polish non-user-generated videos is 3,228,499 (min.: 166,237 views; max.: 62,201,503 views), while the median number of views for 7 Polish user-generated videos is 1,019,303 (min.: 356,960 views; max.: 8,028,727 views).

DISCUSSION

Even though 92.2% of the links most often posted by Facebook users represent non-user-generated content, the proliferative power of SNSs enabled some user-generated content to become enormously popular (or, in terms of the present article, enter the Facebook mainstream). Out of the 8 UGC links, 5 concerned political matters. All of these five links somehow opposed the view presented by the old media mainstream: two pointed to anti-ACTA content long ignored by the old media, two

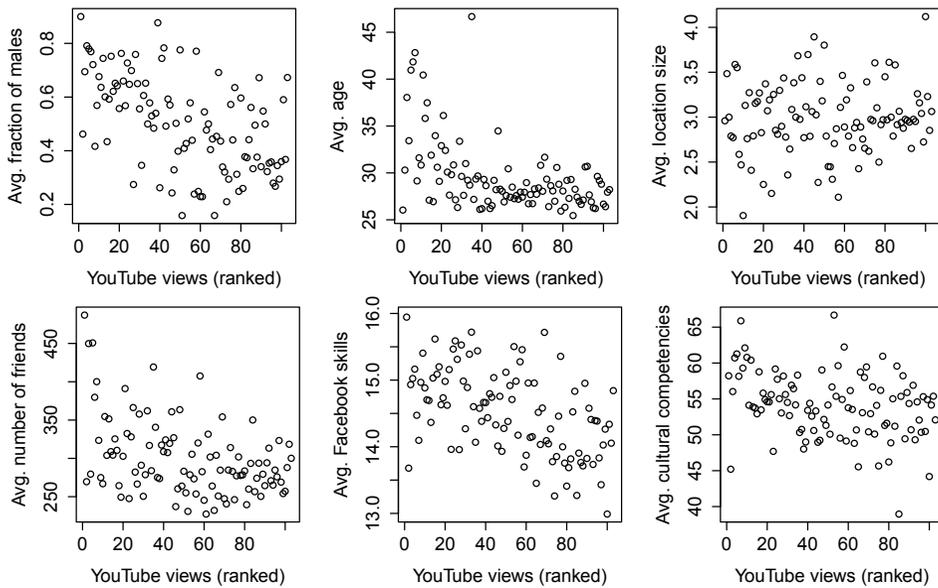


Figure 2. Scatter plots demonstrating the relationships between users’ average characteristics (associated with analyzed links) and the ranked values of “YouTube views (ranked)” variable. A single dot represents one of 103 links under study

Note: $N = 103$.

Source: research data.

pointed to anti-Polish-government content while the majority of the mainstream media were supportive, and the latter link aimed at showing the media manipulation concerning the coverage of National Independence Day celebrations. To sum up, even though link-posting activity of Facebook users focuses mainly on sharing links to music videos, it also proves to be a valuable tool for popularizing the ideas contrary to the ones dominating the old media mainstream.

The reproduction of the non-user-generated content on Facebook is primarily due to female users, younger users, users who inhabit larger cities, who have fewer friends, and are less culturally competent. The younger users themselves constitute the majority on Facebook, and thus the dominance of youth-centered content comes as no surprise. It is nevertheless intriguing to what extent younger users depend on non-user-generated content when sharing links with friends. It turns out that younger users either do not use Facebook for such resistant practices as posting links to non-corporate content, or their actions do not attain enough interest of fellow Facebook users to be able to proliferate widely.

The users with a smaller number of friends, less culturally competent and technically skilled more often link to content which is enormously popular in terms of YouTube.com views. Links to this kind of content also tend to receive

more likes and comments on Facebook. These results partly validate the Social Compensation hypothesis (see: Zywicki, Danowski, 2008), which states that socially disadvantaged users may seek to compensate for their situation by developing a more extensive online social presence. Socially disadvantaged users may obtain valuable social feedback by posting links to popular content. This comes at a cost, though: a user is confined to reproducing the mainstream content. In other words, one's lower social position can be compensated for by on-line presence, but the user has to play the mainstream game. This finding advances the understanding of the Social Compensation hypothesis by pointing at the social constraints which socially disadvantaged individuals must comply with in order to enhance their social position.

Limitations

There is a number of limitations to the present study. First of all, it is limited to a single Social Networking Site, and thus may not reflect the developments characteristic for other similar services. It is also strongly limited to Polish users of Facebook. Moreover, the assumed notion of mainstream versus non-mainstream content does not include the analysis and comparison of social values and norms promoted by the studied videos. Instead, it is based on the non-qualitative indicator of the number of views.

REFERENCES

- Anderson, C. (2008). *Long Tail: Why the Future of Business Is Selling Less of More*. New York: Hyperion.
- Baek, K., Holton, A., Harp, D., Yaschur, C. (2011). The links that bind: Uncovering novel motivations for linking on Facebook. *Computers in Human Behavior*, 27 (6), pp. 2243–2248.
- Brabham, D.C. (2008). Crowdsourcing as a model for problem solving. An introduction and cases, *Convergence: The International Journal of Research into New Media Technologies*, 14 (1), pp. 75–90.
- Castells, M. (2009). *Communication Power*. New York: Oxford University Press.
- Downing, J.D. (2003). Audiences and readers of alternative media: The absent lure of the virtually unknown. *Media, Culture & Society*, 25 (5), pp. 625–645.
- Facebook. (2013). *Graph Api*. Retrieved April 25, 2013 from: <https://developers.facebook.com/docs/reference/api/>.
- Howe, J. (2006). *Crowdsourcing: A definition*. Retrieved April 25, 2013 from: http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing_a.
- Jenkins, H. (2006). *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.
- Kama, M.N. (2000). Language, region and national identity. In: Sharma S.L., Oommen, T.K. (eds.). *Nation and National Identity in South Asia*. Delhi: Orient Longman Ltd., pp. 75–96.
- Karahasanović, A., Brandtzæg, P.B., Heim, J., Lüders, M., Vermeir, L., Pierson, J., Jans, G. (2009). Co-creation and user-generated content — elderly people's user requirements. *Computers in Human Behavior*, 25 (3), pp. 655–678.
- Kellner, D. (2003). *Media Culture: Cultural Studies, Identity and Politics between the Modern and the Post-modern*. London: Routledge.

- Lessig, L. (2008). *Remix: Making Art and Commerce Thrive in the Hybrid Economy*. New York: Penguin Press.
- Miller, K.S., Knutson, J.F. (1997). Reports of severe physical punishment and exposure to animal cruelty by inmates convicted of felonies and by university students. *Child Abuse & Neglect*, 21 (1), pp. 59–82.
- Nadkarni, A., Hofmann, S.G. (2011). Why do people use Facebook? *Personality and Individual Differences*, 52 (3), pp. 243–249.
- Newman, N. (2009). *The rise of social media and its impact on mainstream journalism*. Oxford: Reuters Institute for the Study of Journalism. Retrieved April 25, 2013, from: https://reutersinstitute.politics.ox.ac.uk/fileadmin/documents/Publications/The_rise_of_social_media_and_its_impact_on_mainstream_journalism.pdf.
- OECD (2007). *Participative Web and User-Created Content: Web 2.0, Wikis and Social Networking*. Retrieved April 25, 2013, from: http://www.org/document/40/0,3343,en_2649_34223_39428648_1_1_1_1,00.html.
- Polskie Radio (2010). *Number of Facebook users rockets in Poland*. Retrieved April 25, 2013, from: <http://www2.polskieradio.pl/eo/dokument.aspx?iid=139918>.
- Stiegler, B. (2006). *The disaffected individual in the process of psychic and collective disindividuation*. Retrieved April 25, 2013, from: <http://arsindustrialis.org/disaffected-individual-process-psychic-and-collective-disindividuation>.
- Wallsten, K. (2010). “Yes we can”: How online viewership, blog discussion, campaign statements, and mainstream media coverage produced a viral video phenomenon. *Journal of Information Technology & Politics*, 7 (2–3), pp. 163–181.
- Whannel, P., Hall, S. (1964). *The Popular Arts*. London: Hutchinson.
- Zywica, J., Danowski, J. (2008). The faces of Facebookers: Investigating social enhancement and social compensation hypotheses; predicting Facebook™ and offline popularity from sociability and self-esteem, and mapping the meanings of popularity with semantic networks. *Journal of Computer-Mediated Communication*, 14 (1), pp. 1–34.