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Published paper

Holmes, Paul and Cox, A.M. (2011) *"Every group carries the flavour of the admins": leadership on Flickr*. International Journal of Web Based Communities (IJWBC), 7 (3). pp. 376-391. ISSN 1477-8394

<http://dx.doi.org/10.1504/IJWBC.2011.041205>

“Every group carries the flavor of the Admins”:

Leadership on Flickr

Abstract

Although leadership in many types of online community has been recognised as important, relatively little has been written about its nature in informal communities, particularly in the context of web2.0. This study explores the role played by Admins on the photo sharing site Flickr. Semi-structured interviews with six Admins investigated roles and motivation in some depth. A content analysis was conducted to explore the character of Admins’ activities on discussion boards in four types of group. The interviews revealed the dedication that Admins gave to the role. They saw their activities as one of the main critical success factors for any group. Groups were heavily shaped by Admins. The content analysis revealed that Admins play a wide range of roles in groups, with markedly varying emphasis between different group types.

Keywords: Flickr, web2.0, online community, moderation, leadership

1. Introduction

Although the complex system of moderation that has evolved on Wikipedia is well known and acknowledged as a critical success factor (e.g. Bruckman & Forte, 2008) discussion of web2.0 often glosses over the extent to which systems based on user created content require active human coordination. Because companies running web2.0 sites do not themselves directly undertake moderation does not mean that such roles do not continue to be performed, but on a voluntary basis. In fact, some web2.0 sites, like Flickr, may be highly dependent on informal leadership roles undertaken by moderators and other activists. This paper sets out to explore the role of Flickr “Admins” by e-interviews and through content analysis of a sample of Admin activities in different group types.

2. Leadership roles in online communities

2.1 Flickr

Flickr is a photo storing and sharing web site, founded in 2004 and from 2005 owned by Yahoo. It is notable for its size, with billions of photos and often cited as a typical example of web 2.0. A significant part of the value of Flickr for many of its users are the social tools it provides alongside its content management functions (van House 2007, Cox et al. 2008). These include the ability to comment on the photographs of others, list people as contacts, send private messages and create or join groups. Although primarily seen as a social networking site, where users manage their own collection of photos, and link to disparate personal contacts, much of the social activity of the site revolves around groups. The main feature of groups (see Figure 1) is the concept of a “pool” where members can post their photographs. Groups generally have a central theme to which the photographs posted must adhere to. The group topics themselves vary greatly from very broad genre (black and white photography), through very specific topics (such as photos of a small village) or the use of specific equipment, to competitions. As Prieur et al (2008: 5) state, there is “a great diversity in the types of groups, in their content as much as in their rules and activity”. Many groups are primarily a way to publicise photos, but some develop specific activities and discussions sufficient for members to feel they are online communities. Each group also has a discussion board (see Figure 2).

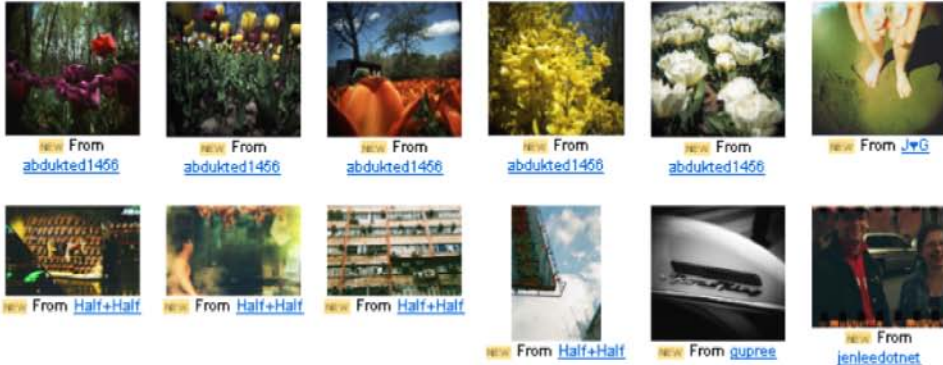
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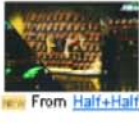
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
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Michael Kuhle (a group admin) says:
13 Dec 07 - Hi there! Please only use the Group Photo Pool for images shot with the Diana+. If you've got a classic Diana camera, then there's an excellent group for those shots at <http://flickr.com/groups/dianaphotos/>

Discussion ([687 posts](#) | Only members can post. [Join?](#))

Title	Author	Replies	Latest Post
NEW To buy or not to buy?	 Sam McMahon	8	5 hours ago
NEW Are you in south Florida? Great lab in Fort Lauderdale!	 Kathy Hunt Photo	5	13 hours ago
NEW Insert frame help	 Maxtape	3	22 hours ago
NEW lens cap keeps falling off and 1st roll came out looking too 'normal' !?	 contentedNess	5	22 hours ago
NEW New Shots	 pndeering	2	31 hours ago
NEW lens FALLS OUT?	 mike mauri	5	2 days ago

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About Diana+ & Diana F+

The premiere hot spot to share images, tips, stories, and comments on the Lomography Diana+ & Diana F+ cameras!

Note: members are limited to 5 photo uploads per day. Please only upload shots taken by the Diana+ or Diana F+.

<http://www.lomography.com/diana>

Additional Information

- This is a public group.
- Members can post 5 things to the pool each day.
- Accepted media types:
 - Photos
 - Video
- Accepted content types:
 - Photos / Videos
 - Screenshots / Screencasts
 - Illustration/Art / Animation/CGI
- Accepted safety levels:
 - Safe

Figure 1 –Flickr Group

flickr Signed in as [Paulio Holmes](#) [Help](#) [Sign Out](#)

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New Shots	pndeering	2	32 hours ago
lens FALLS OUT?	mike mauri	5	2 days ago
Diana F+ & Diana Back For Sale	menonita rocker	0	3 days ago
More tips for a Diana + ignorant...	PearlyXG	28	3 days ago
New Limited Edition DIANA F+ :)	ΔFILIA	8	3 days ago
Tips on Telephoto lens	SilvinhaTMC	5	3 days ago
Cross Processing (vs Slides or with Slides?)	hauserliz	5	3 days ago
Diana F+ "Lensflare"?	konstantin-b	28	4 days ago
Film Trouble	MD1298	4	4 days ago
Borders on prints: good or bad?	Doreez Dad	4	4 days ago
Recommendations for film?	ANTHONY DE LA RUE	13	6 days ago
Is it possible to rewind film TOO FAR?	itackada!	2	7 days ago
120 Film Developing in Raleigh, NC	itackada!	0	7 days ago
wich frame mask do I use for slide film	fideelski	2	7 days ago
filter help	hullstockhull	5	8 days ago
Shooting Scale Models With Diana+ - Advice needed :)	Gavin Fraser	3	8 days ago

[< Prev](#)
1
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(587 discussions in Diana+ & Diana F+)

Figure 2 – Group Message Board

The creator of a Flickr group automatically becomes an Admin. They can change the name of the group, its description and rules. Flickr also gives them various powers to add or block users, and edit photos in the pool and discussions. The Admin can make other group members into new Admins or “moderators”, a slightly more limited role, editing photos, discussion postings or membership. They can also give these roles group specific names, eg one group calls its Admins “grouppicturemeisters” and moderators deputy “grouppicturemeister”.

2.2 The importance and nature of leadership in online communities

The role of online discussion moderator has now been in existence for around 30 years. According to Anderson & Kanuka (1997) the first to identify the role of the moderator in online discussions were Hiltz and Turoff (1978). They associate moderation with inviting participants, setting agendas, deleting/editing messages and summarising discussions; “the moderator has to work very hard at both the “social host” and the “meeting chairperson” roles”. The role of moderator has remained an important aspect in the formation and maintenance of online communities. The discussion of moderation or leadership in online environments has continued within a number of contexts: such as in formal Online Learning Environments (OLEs) (e.g. Ambrose, 2001; Salmon, 2004; Scales 2010), in Virtual Communities of Practice (VCoPs) inside organizations (e.g. Bourhis et al, 2005) as well as e-leadership in virtual teams (e.g. Avolio et al. 2009), in production communities like open source communities (e.g. O’Mahoney & Ferraro 2007) and in gaming (e.g. Siittonen 2009). The different purposes and contexts of the groups are likely to affect the character of leadership, though common themes do seem to emerge, such as the need for a “soft spoken” approach. Off line analogies with informal leadership in voluntary associations (e.g. Markham et al 2001) are also interesting, though again the social values of such groups shape attitudes to leadership in particular ways. The role of the moderator in informal online communities, however, has been little researched, even though it is often described as the most important factor in the success of online communities (Zhang & Watts, 2008; Anderson & Kanuka, 1997; Mason, 1991).

The literature agrees in finding leadership in online communities as very important.

“Physical structures – such as roads and parks – can precipitate the development of a town. Similarly, social and organizational structures, such as a community coordinator ... can precipitate the evolution of a community.” (Wenger et al, 2002).

Since the development of communities through proposed stages of development is seen as being shaped by leadership in models such as that of Salmon (2004) and Zhang and Watts (2008) they agree in holding the leadership role to be vital. Thus for Zhang and Watts moving beyond simple information sharing to the highest level, that of an Online Community of Practice, requires strong levels of support, particularly “active involvement of moderators”. Similarly, Gray (2004) argues that “the presence of an online moderator helped the community evolve from a forum for sharing information to a community of practice where knowledge was constructed through shared learning.” Siittonen (2009) found MMOG players saw the leaders as providing much of the energy of

the community, as “primus motor”. Ho and Huang (2009) also found that leadership was among group success factors in video game communities. This suggests that the sort of moderation performed defines the essence of the community; it is the moderator that sets the tone of the community (Berge & Collins, 2000), “the discussion moderator or starter is a key player in determining the depth of dialogue and overall knowledge generation processes” (Mason, 1991).

Leadership in these contexts is usually construed as beneficial, eg in OLEs. The informality of some communities, however, leaves open a potential for it to be coercive, arbitrary and self interested. Yet power exercised transparently and consistently in conformity to explicit rules, can be legitimate. Thus game players see some authority as necessary (Siitonen 2009).

Despite agreement about its importance and benefit there seems to have been little discussion of how the moderation that takes place varies between communities (Berge & Collins, 2000). An exception is Bourhis et al (2005) who emphasise how differently leader roles were exercised in different cases and how important this was to community success. Time given to the role and enthusiasm of the leader were very important. This is in an organisational context so it is not clear how it applies in other types of community. Online communities have different goals and even communities with similar purposes can be very different (Preece & Maloney-Krichmar, 2003). There are some taxonomies of group role available, but there is little empirical research on the frequency of their occurrence.

2.3 Roles

Those who set up or run groups both have privileged system access, but they also have a social role in shaping a community. “Technical responsibility in online groups goes hand in hand with social responsibility” (Butler et al 2002). Mason (1991) suggested that the roles of moderators fall into three categories. These are organisational, social and intellectual roles, while Berge (1995) adds a fourth of technical (Table 1).

Category	Examples
Intellectual Roles	Encourage learning primarily through facilitation e.g. asking questions to focus discussions.
Organisational / Managerial Roles	Management of interactions e.g. organising activities, decision making and administration duties.

Social Roles	Creating a friendly environment e.g. sending welcoming messages to new members.
Technical Roles	Making participants feel comfortable with the technology being used.

Table 1 – Categories of Moderating Roles (Berge, 1995)

A more comprehensive but less organized list was collated by Berge & Collins (1997) :

- *Assistant*
- *Consultant*
- *Contextualizer*
- *Coordinator*
- *Discriminator*
- *Editor*
- *Entertainer*
- *Expert*
- *Explainer*
- *Facilitator*
- *Filter*
- *Fire fighter*
- *Goal setter*
- *Helper*
- *Host*
- *Intermediary*
- *Leader*
- *Lecturer*
- *Manager*
- *Marketer*
- *Mediator*
- *Meeting chairperson*
- *Mentor*
- *Observer*
- *Pace-setter*
- *Participant*
- *Promoter*
- *Provocateur*
- *Social host*
- *Tutor*

Such lists are a useful starting point for exploring the nature of leadership roles, but there is a lack of empirical data on which of these activities predominate in different contexts.

Most of the discussion of the roles' of moderators has taken place in literature on organisational contexts or about OLEs, which are driven by achieving goals and strongly controlled by the instructor in the tutoring of students (Preece & Maloney-Krichmar, 2003). However, the majority of online communities are what Zhang & Watts (2008) call online common places and online communities, which may never reach the levels of community where knowledge creation occurs. There is a need for a greater understanding about which of the many, often overlapping and diverse roles that have been described, are used within a variety of communities, particularly informal communities. It also seems that the literature of web2.0, though it is concerned with differing levels of participation, does not recognise the potential importance of leadership in user generation of content.

2.4 Research Aims

In order to explore these issues, the paper explores data about Admin roles on Flickr. The key research aim that drove the investigation was *What is the role of the Admin in the informal online communities of Flickr?* More specifically we sought to:

- ❖ Understand how Flickr Admins themselves saw their activities
- ❖ Identify the frequency of different roles carried out by Admins

3. Research method

In order to understand the viewpoint of Admin's themselves, a qualitative approach was taken using interviews with Admins. To look more systematically at what Admins actually do, a quantitative approach was adopted, in the form of a content analysis of interventions in discussions. Interviews enabled the research to explore the views of Admins including activities not included in the content analysis, such as commenting directly on photos, private mails to members and activities in related groups or beyond Flickr itself. Twelve potential interviewees were contacted based on being active Admins within currently active groups, of whom six agreed to being interviewed. The sample is rather small, and may be biased towards those who are particularly committed to the role, and who therefore were more likely to respond to the interview request. Nevertheless the data triangulates well with the content analysis data.

The research was cleared by the University of Sheffield ethical guidelines, and all potential participants were explained the purpose of the project, in order to obtain their voluntary informed consent and ensure they understood their role in the project, and their right to withdraw without giving a reason and to remain anonymous. The potential interviewees were contacted and invited to participate through Flickr's private messaging service (FlickrMail), and provided with an information sheet explaining the project. Face-to-face interviews could have potentially produced richer data, but given the international location of interviewees it was considered most practical to conduct e-interviews. This was certainly less intrusive for the interviewees and given the topic of the study could be reasonably expected to be effective at communicating through this medium. Indeed, some authors such as Meho (2006) suggest that e-interviews are a good alternative to face to face and able to provide high quality data if executed carefully, and can produce more considered and dense accounts by allowing interviewees time to consider the questions. The interviews were conducted through FlickrMail or email depending on the interviewee's preference. The interviews were semi-structured, to allow opportunities to discuss aspects the interviewees might raise as well as address predetermined questions of relevance. After receiving confirmation that an interviewee wished to participate they were sent the first series of questions. Two to four further emails were then exchanged until all scheduled questions and any relevant questions based on their answers had been asked. The transcripts were studied with the aim of revealing any common themes of comment among the different interviewees relevant to the research's aims.

The objective of the content analysis was to gather data on observable moderating behaviour from a sample of active Flickr groups. The approach taken was to look at behaviour on the discussion forum associated with a number of different types of group. While the discussion forum is the primary area of moderation for many online communities, in Flickr, moderation can also extend to maintaining the group pool, discussions within the comments belonging to each photograph and within private messages to group members. However, none of these are systematically observable. Nevertheless, since the discussion forum is likely to be an active space if a community is developing, the content analysis can still provide a useful insight into what Admins are doing to manage informal communities, so long as it is remembered that it offers a partial picture of overall activity.

It was decided to build the sample focussing on different types of group. From observation it seemed that there were four recurring types of group which were defined as follows:

- **Location Groups** – Members primarily consist of those taking photos of a particular geographical area, often residents there.
- **Award / Contest Groups** – Focused on “awards” giving or competitions for good /interesting photographs
- **Learning / Critique Groups** – Focused on members learning something new whether it be by critiquing the photographs of others or discussing a particular photographic technique.
- **Subject / Theme Groups** – Focused on a particular photographic subject or theme of interest such as photographs taken by a particular camera or a particular type of photo, eg landscape.

Although there may be other types of group and some specific groups might mix a number of types, this categorisation seemed to be effective in differentiating some significantly different types of activity. The group types partially match Pissard and Prieur’s (2007) characterisation of Flickr thematic and social networks.

For a first sample five groups were identified for each group type. A second sample of five was subsequently selected, with around 19% of the 2010 items being second coded. Inter coder reliability was calculated, producing 88% percent agreement. Although the sample is small, for the purposes of exploratory research it was deemed to be adequate. To collect the data, in the case where there were multiple Admins in the group, one was chosen at random. Ten discussion board threads where this Admin was active were selected at random from each of the group’s discussion boards, by a google search using the Admin ID as the search term to generate a list of relevant group

threads. Each thread was then analysed for moderating actions inside the Admins' posts and outside it (actions such closing the thread and editing the posts of others), and individual actions recorded in a tally for its appropriate category. If an Admin's comment served more than one clear purpose a count was made for each purpose. The basis of the coding scheme was the various roles of moderators identified in the literature review. New roles were identified and described as necessary.

4. Findings

4.1 Interview findings

All of the interviewees were male, two located in England and four in America. Those interviewed all had many years of experience of being Admins, two having been members from Flickr's foundation in 2004 while the rest had at least two years experience. Some interviewees had experience of administrating outside of Flickr, one had been doing it since 1981, he said. There were a few ways interviewees became Admins. They were either invited to by an existing Admin or they put their name forward when Admins asked if anyone was interested in the role or they created a new group for a particular reason. After their first group, all of the Admins went on to take over dormant groups, create more new groups or found themselves invited to administrate further groups. The total amount of groups in which they were Admins was between two and sixteen; they were also often moderators in other groups.

Use of words such as dedication and commitment were common throughout the interviews. The role was time consuming, *"I thoroughly enjoy participating in some of my groups, and spend a possible 3 or 4 hours each day, helping with answers and contributing"*. The majority indicated that while they were interested in the photography on Flickr, if they were not Admins they would spend much less time participating in its communities or Flickr in general, *"I might still participate in sharing of images to an extent but the main reason i participate so much now is the opportunity I have been given as an admin"*, though one interviewee said it would have no effect at all. All of the interviewees said that within their groups they had either a few or one which they dedicated most of their time to Admin activities. Often they worked closely with other Admins.

The activities of Admins were recognised to be a critical success factor for a group.

"...we have some talented people on there and some active admins, I think lack of members, uninterested admins, and lack of focus are the main reasons for inactivity."

"...these groups seem to keep focussed through the strength of the software itself and also the technical knowledge of the admins and lots of the members. On both these groups the rules ...are

pretty much strictly enforced”

Of three primary factors in a group’s success attention and effective input from Admins was often seen as central along with the members’ activity and the strength of the group’s concept. All of the interviewees repeatedly stated or implied that Admin activity is important to the success of groups, *“where the Admins are not very active, or interested, the community tends to die”*. *“The Admins are the glue of this group and always have been”* another said.

“I made sure to personally greet each new member.....I commented on each of the first 1,000+ photos entered into our Pool. I was terrified that the group would fail. Now, we have assembled a great group of leaders (both with titles and without) and it allows me more time for "real life.””

Admins had different styles. One Admin saw his role as being particularly centred on careful management of people in “keeping the peace” and maximising the potential of others, while another saw his role as being more based around the filtering of discussions and the group pool. Yet Admins dedication in each case was driven by a vision for the group, especially of how people should relate to each other and the activity of the group.

“I decided to create my own group where I could have some control over how people were treated.”,

“I formed [Learning Group] under the thought that "no one is beyond learning. The most experienced can learn from the newest member...if they allow themselves to." This has been proven out.”

As a result Admins were very wary of intrusions on the groups they had created.

“Through our Admin group, we discuss potential issues and any trouble that any of us see coming. Our goal is always to head things off before they infect the group.”

Several Admins spoke scornfully about individuals who join their groups and cause trouble as they perceived it. While the content analysis found little evidence for it, several interviewees stressed the need of maintaining peace in their groups, and the importance of the role of firefighter. Yet there was clearly limits on how far power should be exercised.

“All online forums need moderation and the best ones, the ones that turn into real communities have

active moderators who aren't full of their power, are regular participants just like everyone else, but will exert gentle power if need be to keep things in line."

Descriptions of the exercise of power echo Reagle's (2007) characterisation of "authorial leadership" in Wikipedia, which is exercised lightly, with humour and politeness.

Thus Admins dedicated a considerable amount of time working in one or a few of their groups. They saw their own sheer level of activity and power to focus and fireproof other members activity as a critical success factor. It was the Admins that shaped their groups.

As one interviewee said *"Every group on Flickr carries the flavor of the Admins to some extent."*

4.2 Content analysis

Table two offers the final list of roles as identified in the literature (especially Collins and Berge 1995,2000) and refined during the content analysis.

<u>Role</u>	<u>Content Analysis Definition</u>
Coordinator	Actions organising or encouraging people to contribute to a group activity. For example competitions are often created and administered or real life meetings arranged between members.
Editor	Modification to the posts of others or selecting material created by group members for display.
Expert	Comments which constitute the passing of specific non-common knowledge with the aim of informing a member or the group in general.
Explainer / Helper	Comments not as specific as expert knowledge, but which aim to clarify a members' understanding or attempt to help them resolve an issue.
Filter	Actions which aim to reduce unwanted comments, photographs, material etc. In effect deciding what is "on-topic".
Fire fighter	Action which aims to stop or pre-empt any "flames" or personal attacks.
Manager	Actions or comments involving the administration and organisation of the group e.g. closing threads and inviting members, clarifying managerial policies/actions and organising the group pool e.g. images might want certain tags attributed to them.
Social host	Comments intended to encourage, thank or support members and create a welcoming atmosphere.
Discussion Leader	Comments which are aimed to stimulate discussion by creating topics, talking points and posing questions.
Participant	Comments which contribute in the same way as an ordinary

member might, e.g. through posting photos in a competition or giving a reply to a request for personal experience.

Table 2 – Discussion Board Roles

The small differences include that what Collins & Berge (2000) term “facilitation” is here covered by “participation” and “fire fighter”. “Social host” and “coordinator” roles were added and of the role of “marketer” omitted. Given their frequency of occurrence (see table 3 below) we would consider most of the definitions stable, but because we only found a few examples of helper/explainer, filter and firefighter we consider these to be the least robust categories.

Group Type Analysis and Discussion

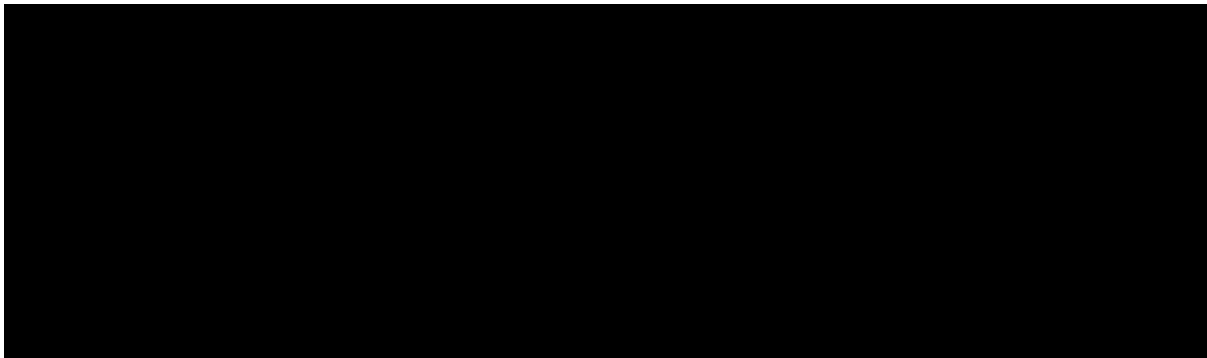


Table 3 – Content analysis of Admin activity by group

Overall, as Table 3 shows, award groups showed significantly more Admin activity, nearly three times as much as occurred across the other group types. Most of the activity was acting as an editor, i.e. direct editing of content created by members. These groups were also unusual in simple participation by Admins being low. In the other three group types the most common action was participation, implying a less hierarchical, more participative model of involvement by Admins. Taken as a whole many of the roles were little seen, such as firefighter (observed only a handful of times), filter, helper/explainer and discussion leader – though some of these roles do seem at least marginally significant within particular types of group.

Location Based Groups

Nearly 40% of Admin activity in location based groups was simple participation. Coordinator was the most significant leadership role, implying a need to encourage further participation. This was consistent with subsidiary roles being social host and discussion leader. As members of these groups are often geographically proximate to each other there is a greater level of coordination between

members to arrange “meet ups”. The need to lead and participate in discussions may come from a desire to focus and stimulate discussions, as unlike the other groups studied these groups have a less clear subject or photographic objective to concentrate on.

Award / Contest Groups

The lack of participation and the heavy activity in the area of editing the posts of others, reflects the Admin role in award groups being running the competitions. Apart from coordination, all other types of Admin activity were very low, implying the lack of need for real group formation where the object is to make awards. These groups are almost devoid of flowing discussion and any indications of community. The groups have become competition processing areas because the Admins have defined them as such through their actions.

Learning / Critique Groups

Activity in the learning groups is quite diverse. Participation is important, but there is a spread of other activity through being a social host, expert and helper/explainer. The Admins appear to be taking a lead role in helping members learn by spending much more time providing expert advice and explaining than the other group types, while their greater focus on being a social host could be attributed to a desire to encourage people to interact generally to produce feelings of safety and friendliness to support learning.

Subject / Theme Groups

Subject groups have a significant level of simple participation. Similar to the learning groups, there is a focus on providing expert knowledge and explanation, though a little less than in that type of group. This suggests having a good (expert) knowledge of the subject in question is important for Admins to be able to carry out their role, though all group types had evidence of this activity to some extent. However, in contrast with the learning groups, subject groups had the lowest average for the “social host” role indicating the emphasis here is more towards providing a useful resource for members, as opposed to encouraging them to interact socially. Presumably the reason for the lack of coordination in both subject and learning groups is that these groups have clearer topics around which to generate discussion and activity.

Conclusion

The interviews stressed the importance of activity of Admins. This seems to be confirmed by the frequency in the content analysis of roles such as a coordinator, discussion leader, social host and

expert. Keeping groups focused, on-topic and running smoothly was also a recurring theme throughout all of the interviewees. The interviews also showed that some behind the scenes roles such as firefighting and marketing a group, as well as mentoring others, were more frequent than the content analysis revealed. Simply because the content analysis was limited to interventions archived in the discussion group, some types of intervention are under-represented. The content analysis should only be seen as a sample of Admin activity, therefore. Nevertheless, what the analysis does show quite clearly is that the style of intervention was very different between group types, with some groups seemingly having quite top down styles of control, while others had a much more participative style.

5. Discussion

Interviewees were all dedicated to the task of being an Admin and committed significant amounts of time to it on a daily basis. They usually worked in multiple groups, but with a major commitment to one or two. Admin work was often with others, a feature of online community management not commented on much in previous literature. Many interviewees gave an impression of caring very much for their groups, often speaking with great enthusiasm about them. For the majority of Admins the role has become central to their participation on the Flickr website and induced them to spend more time on it than they would otherwise. One explanation might be that as Blanchard (2004) states it is generally believed that “when participants experience feelings of community, they are more likely to increase or maintain their participation”. Certainly the Admins all thought of their groups as communities often talking enthusiastically about the relationships between members in the groups, and having some personal knowledge of other members or Admins.

The interviews support previous literature in clearly indicating a belief that the creation, success and failure of groups is determined by the actions of Admins. Three interrelated factors appeared to be the most significant to interviewees in determining the success of a group. These were the group’s concept, not only in terms of its subject but also its ideals and aims, the group attracting membership and effective regularly active administration. Ultimately all factors are the responsibility of Admins.

Notwithstanding the agreement on the importance of the role, the content analysis gave a strong indication that what Admins do varies significantly across different types of group. Activity seemed to be heavier in Award type groups and in this context tended to be editorial. Perhaps authority here should be understood as mirroring that in games, where firm leadership is welcomed by players

(Siitonen 2009). In contrast the Admin in learning groups acted out the role of expert or simply of participant. Perhaps the model here is closer to OLEs. Some behind the scenes activity such as firefighting and marketing was not detected by the content analysis, but there does seem to be a clear indication that though the energy and vision of the Admin is common across all successful groups, the nature of involvement is very different.

6. Conclusion

That the activities of Admins or moderators can help determine whether communities are successful, demonstrates how their roles are often as important in informal communities as in formal communities and continue to have significant value, even within what is perceived as being a new web 2.0 era. As Cox (2008) points out, Flickr's overall community was established by its founders' careful management, and in such a manner as to be reminiscent of the moderating behaviour observed in its current groups. Although Flickr itself is probably best seen as a site where individuals manage their photos and social network of contacts, its success seems to lie in its also drawing ideas of community, so that for active participants groups have a specially important function. Therefore there is value in understanding administration and moderation within informal communities further.

Further research similar to that undertaken here would be worthwhile. The relation of group type to Admin role is worthy of further investigation, as well as a wider look at how Admins in different groups conceive of their role. Further research might also examine how members of groups perceive the Admin, their contribution to group critical success factors and members' response to the different ways power is exercised by Admins. More work is needed on off discussion list activities of Admins including informal interactions between Admins themselves, as collaborative leadership in online communities seems to have been little studied. Some groups have very large numbers of Admins, we need to know how this activity is coordinated.

Flickr Admins invest significant amounts of their time in their roles, which they see as essential for the creation of groups which are of value to both themselves and their participants. Their role contributes a significant amount of value to the Flickr website. How user generated content can be managed through the voluntary dedication of relatively few users is an often overlooked aspect of the discussion of web 2.0.

References

- Ambrose, L. (2001). "Learning Online Facilitation Online" [Online] http://leaders.flexiblelearning.net.au/fl_leaders/fl00/lyn_ambrose.htm [accessed 6th December 2009]
- Anderson, T. & Kanuka, H. (1997). "On-Line Forums: New Platforms for Professional Development and Group Collaboration" [Online] <http://jcmc.indiana.edu/vol3/issue3/anderson.html#rref10> [accessed 6th December 2009]
- Avolio, B.J., Walumbwa, F.O. & Weber, T.J. (2009). Leadership: Current theories, research and future directions, *Annual Review of Psychology*, 60, 421-449.
- Berge, Z.L. (1995). "Facilitating Computer Conferencing: Recommendations from the Field." Educational Technology. [Online] Vol. 35 No. 1, pp.22-30. http://www.emoderators.com/moderators/teach_online.html [accessed 6th December 2009]
- Berge, Z.L. & Collins, M.P. (1997). "Moderating Online Electronic Discussion Groups" Paper presented at the American Educational Research Association Chicago, IL. March 24-28. [Online] http://www.emoderators.com/moderators/sur_aera97.html [accessed 6th December 2009]
- Berge, Z.L. & Collins, M.P. (2000). "Perceptions of e-moderators about their roles and functions in moderating electronic mailing lists". *Distance Education: An International Journal*, [Online]. Vol. 21 No.1, pp.81-100 <http://www.emoderators.com/moderators/modsur97.html> [accessed 6th December 2009]
- Blanchard, A. (2004). *Blogs as Virtual Communities: Identifying a Sense of Community in the Julie/Julia Project* [Online]. University of Minnesota http://blog.lib.umn.edu/blogosphere/blogs_as_virtual.html [accessed 6th December 2009]
- Bourhis, A. et al (2005). "The success of virtual communities of practice: the leadership factor", *The Electronic Journal of Knowledge Management*, [Online] Vol. 3, No. 1, pp.23-34. <http://www.ejkm.com/volume-3/v3i1/v3-i1-art3-bourhis.pdf> [accessed 6th December 2009]
- Bruckman, A. & Forte, A. (2008). "Scaling Consensus: Increasing Decentralization in Wikipedia Governance" [Online]. Proceedings of the 41st Annual Hawaii International Conference on System Sciences http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=4438860 [accessed 6th December 2009]
- Butler, B., Sproull, L., Kiesler, S. & Kraut, R. (2002). Community effort in online groups: Who does the work and why? In S.Weisband & L.Atwater (Eds) *Leadership at a distance*.
- Cox, A.M., Clough, P. & Marlow, J. (2008) "Flickr: a first look at user behaviour in the context of photography as serious leisure." *Information Research*, Vo. 13, No. 1 <http://informationr.net/ir/13-1/paper336.html> [accessed 6th December 2009]
- Cox, A. M. (2008). "Flickr: A case study of Web2.0" [Online]. *Aslib Proceedings* Vol. 60, No. 5 pp.493-516.

- Gray, B. (2004) "Informal Learning in an Online Community of Practice" *Journal of Distance Education* [Online]. Vol. 19, No. 1, pp. 20 – 35
http://www.cndwebzine.hcp.ma/IMG/pdf/GRAY_article.pdf [accessed 6th December 2009]
- Hiltz, S. R. & Turoff, M. (1978). *The Network Nation: Human Communications Via Computers*. MA: Addison-Wesley.
- Ho, S-H. & Huang, C-H (2009) Exploring success factors of video game communities in hierarchical linear modelling: The perspective of members and leaders, *Computers in Human Behavior* Vo. 25, No. 3, 761-769.
- Koh, J., Kim, Y-G, Butler, B. & Bock, G-W. (2007) Encouraging participation in virtual communities, *Communications of the ACM*, Vol. 50, No.2, 69-73.
- Markham, W.T., Walters, J. & Bonjean, C.M. (2001) Leadership in voluntary associations: The case of the "International Association of Women", *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, Vol. 12, No.2, 103-130.
- Mason, R. (1991). "Moderating Educational Computer Conferencing" [Online]
<http://www.emoderators.com/papers/mason.html> [accessed 6th December 2009]
- Meho, L. I. (2006). "E-Mail Interviewing in Qualitative Research: A Methodological Discussion" *Journal of the American Society for Information Science and Technology* [Online]. Vol. 57, No. 10, pp. 1284-1295. <http://dlist.sir.arizona.edu/1645/01/email-interviewing.pdf> [accessed 6th December 2009]
- O'Mahony, S. & Ferraro, F. (2007). The emergence of governance in an open source community, *Academy of Management Journal*, Vol. 5, No.6, 1079-1106.
- Preece, J. & Maloney-Krichmar, D. (2003) "Online Communities: Focusing on sociability and usability" [Online] <http://isis.ku.dk/kurser/blob.aspx?feltid=102191> [accessed 6th December 2009]
- Prieur et al. (2007) *Thematic and Social Indicators for Flickr Groups* [Online].
<http://www.aaai.org/Papers/ICWSM/2008/ICWSM08-050.pdf> [accessed 6th December 2009]
- Prieur et al. (2008) *The Strength of Weak cooperation: A Case Study on Flickr* [Online]. HAL - CCSD
<http://hal.archives-ouvertes.fr/docs/00/25/66/49/PDF/weak-coop-flickr-v1.1.pdf> [accessed 6th December 2009]
- Reagle, J.M. (2007) Do as I do; Authorial leadership in Wikipedia, *WikiSym* October 21-23, Montreal, Canada.
- Salmon, G. (2004). *E-moderating Key to Teaching and Learning Online*. London: Kogan Page Limited.
- Scales, E.B. (2010). Leadership in a virtual community, *International Journal of Web Based Communities*, Vol. 6, No.2, 197-208.
- Siitonen, M. (2009). Exploring the experiences concerning leadership communication in online gaming groups, *Mindtrek* September 30th to November 2nd, Tampere, Finland.

Van House, N. (2007) Flickr and public image sharing: distant closeness and photo exhibition, *CHI* 2007 San Jose, California.

Wenger et al (2002). *Cultivating Communities of Practice: A Guide to Managing Knowledge*, Boston: Harvard Business Press

Zhang, W. & Watts, S. (2008). "Online communities as communities of practice: a case study" *Journal of Knowledge Management* [Online]. Vol. 12, No.4, pp.55 – 71